BIJOA

Index to Volume 122

The Biochemical Journal

Editorial Board

D. G. Walker (Chairman)
D. S. Robinson (Deputy Chairman)
M. J. Crumpton (Deputy Chairman)
H. B. F. Dixon (Deputy Chairman)
R. H. Burdon
R. A. Cox
J. E. Cremer
A. R. Crofts
N. M. Green*
B. S. Hartley
K. M. Jones
J. D. Judah
A. E. Kellie
J. R. Knowles
U. E. Loening
P. N. Magee
D. J. Manners
R. D. Marshall
P. A. Mayes
J. H. Moore
C. J. O. R. Morris
K. Murray
A. C. T. North*
D. V. Parke
C. A. Pasternak
R. N. Perham
H. R. Perkins
G. K. Radda
R. Rodnight
R. E. Strange
J. R. Tata
P. K. Tubbs
D. C. Watts
F. R. Whatley

Editorial Secretary: J. D. Killip
*Nominated by the British Biophysical Society

The Biochemical Society

Price 20p. (U.S.A. 50 cents)

THE BIOCHEMICAL SOCIETY

OFFICERS AND COMMITTEE, 1971–72

Chairman of the Committee
T. W. GOODWIN, F.R.S.

Treasurer
D. F. ELLIOTT

Committee Secretary
A. N. DAVISON

Meetings Secretary
H. M. KEIR

International Secretary
A. P. MATHIAS

Committee

J. S. D. BACON
R. B. BEECHEY
E. A. DAWES
R. M. C. DAWSON
D. T. ELMORE
R. HOFFENBERG*‡
G. D. HUNTER
V. H. T. JAMES
A. KORNER
C. F. MILLS
H. R. PERKINS†
S. V. PERRY
D. C. PHILLIPS, F.R.S.
P. J. RANDLE
D. S. ROBINSON†
T. A. SCOTT
D. G. WALKER*†
A. M. WHITE

Symposium Organizer: R. M. S. SMELLIE

* *Ex Officio* Member of Committee.
† Representative of Editorial Board of the *Biochemical Journal.*
‡ Representative of Editorial Board of *Clinical Science.*

The Biochemical Society exists to advance the science of biochemistry through meetings and publications. Eleven meetings a year are held, each at a different place; original papers are presented and special topics are discussed at symposia and colloquia.

Persons interested in biochemistry are eligible for election as Members. Details of further facilities accorded to Members, and forms of application for membership, are available from the Executive Secretary, The Biochemical Society, 7 Warwick Court, London WC1R 5DP (01-242 1076/7/8/9).

The *Biochemical Journal* is published and distributed by the Biochemical Society. It is published twice monthly, in four or more volumes per year. It is planned that five volumes will appear in 1971. The index for each volume is published separately.

Subscriptions to the *Biochemical Journal.* For non-members of the Biochemical Society the subscription to the Journal at the present rate of publication is £45 per year (£9 per volume). For non-members in the U.S.A. the 1971 subscription is $110 per year ($22 per volume). All subscriptions are payable in advance at the time of ordering. Orders and subscriptions should be sent to the Biochemical Society (Publications), 7 Warwick Court, London WC1R 5DP.

Claims regarding issues lost or damaged in transit should be addressed to the Biochemical Society at the address in the preceding paragraph. No claims will be entertained if they are received later than three months after the date of posting of the Journal.

Back Numbers. Enquires for volumes 1–19 should be addressed to William Dawson & Sons Ltd., Back Issues Department, Cannon House, Park Farm Road, Folkestone, Kent. Quotations for available issues of subsequent volumes and parts may be obtained on application to Walter J. Johnson Ltd., Berkeley Square House, Berkeley Square, London W1X 6BA, or to the Biochemical Society.

Advertisements. Applications for advertising space should be sent to the Advertising Department, The Biochemical Society, 7 Warwick Court, London WC1R 5DP (01-242 1076/7/8/9). Copy is required eight weeks before publication date. Rate cards are available on request.

Microfilms. Volumes 1–89 (1906–1963) have been recorded on microfilm by Micro Methods Ltd., East Ardsley, Wakefield, Yorks. Details are available from the firm or the Biochemical Society.

London: The Biochemical Society © 1971

Index of Authors

Note. Pages in *Proceedings of the Biochemical Society* are distinguished by P.

ABOUD, M. & BURGER, M. Accumulation of untranslated lactose-specific messenger ribonucleic acid during catabolite repression in *Escherichia coli* 219
ACKRELL, B. A. C. *see* JONES, C. W. 46P
ADHIKARY, P. M. *see* MACDONALD, B. S. 26P
AGRAWAL, H. C., DAVISON, A. N. & KACZMAREK, L. K. Subcellular distribution of taurine and cysteine-sulphinate decarboxylase in developing rat brain 759
AKHTAR, M. *see* ANSARI, A. Q. 107
ALI, S. Y., ANDERSON, H. C. & SAJDERA, S. W. Enzymic and electron-microscopic analysis of extracellular matrix vesicles associated with calcification in cartilage 56P
ALLAN, D. & CRUMPTON, M. J. Solubilization of pig lymphocyte plasma membrane and partial separation of some of the components 15P
ALPER, T. *see* BLUM, E. 677
ANDERSON, H. C. *see* ALI, S. Y. 56P
ANDREW, B. C. *see* ERSSER, R. S. 35P
ANSARI, A. Q., DOLPHIN, P. J., LAZIER, C. B., MUNDAY, K. A. & AKHTAR, M. Chemical composition of an oestrogen-induced calcium-binding glycolipophosphoprotein in *Xenopus laevis* 107
ANSELL, G. B. & SPANNER, S. Studies on the origin of choline in the brain of the rat 741
ANTONINI, E. *see* PHELPS, C. 79
APARICIO, S. G. R. *see* DICKINSON, J. P. 65P
ASHFORD, J. S. *see* BARDSLEY, W. G. 557
AVERY, R. J. & MIDGLEY, J. E. M. Ribosomal ribonucleic acid synthesis in *Bacillus subtilis* 139

BACCINO, F. M., RITA, G. A. & ZURETTI, M. F. Studies on the structure-bound sedimentability of some rat liver lysosome hydrolases 363
BADDILEY, J. *see* GARCIA TREJO, A. 49
BAKER, J. R. *see* JOHNSON, A. H. 16P
BANIK, N. L. & DAVISON, A. N. Exchange of sterols between myelin and other membranes of developing rat brain 751
BANIK, N. L. & DAVISON, A. N. Exchange of sterols between rat brain membranes 26P
BARANDUN, S. *see* CARREL, S. 405
BARDSLEY, W. G., ASHFORD, J. S. & HILL, C. M. Synthesis and oxidation of aminoalkyl-onium compounds by pig kidney diamine oxidase 557
BARKER, D. C. *see* THORNE, K. J. I. 45P
BARKER, G. R., HARDMAN, N. & TWOSE, T. M. Radioactive labelling of multiple-drug-resistance factor in *Escherichia coli* 48P
BARKER, G. R. & TWOSE, T. M. Genetic expression of sex-factor after transfer into irradiated cells of *Escherichia coli* uvrA$^-$ 49P
BARRY, J. M. *see* GREEN, C. D. 20P
BAR-TANA, J., ROSE, G. & SHAPIRO, B. The purification and properties of microsomal palmitoyl-coenzyme A synthetase 353
BASEER, A. *see* SHALL, S. 19P
BASERGA, R. *see* FARBER, J. 189
BASHAR, S. A. M. K. *see* PARISH, J. H. 21P
BASSETT, R. A., CHAIN, E. B. & CORBETT, K. Biosynthesis of ergotamine 58P
BEALE, D. *see* KETTERER, B. 53P
BECKETT, A. H. *see* HEWICK, D. S. 59P
BEECHEY, R. B. *see* CATTELL, K. J. 66P
BELL, D. J. & TALUKDER, M. Q.-K. Fucose in urine of fasting human subjects 24P
BENEDECZKY, I. *see* DUBOIS, F. 46P
BERNS, D. S. *see* MACCOLL, R. 421
BEVAN, M. J. The vectorial release of nascent immunoglobulin peptides 5
BHAGAVAN, H. N. *see* SUNDARESAN, P. R. 1
BLACK, E. G. *see* HOFFENBERG, R. 129
BLESZYNSKI, W. S. *see* ROSE, F. A. 601
BLUM, E. & ALPER, T. Radiation-target molecular weights of urease and of L-glutamate dehydrogenase, and their relevance to the size of the functional subunits 677
BOLDINGH, J. *see* GARSSEN, G. J. 327
BOORMAN, K. N. *see* BUTTERY, P. J. 55P
BOOTH, R., GREGORY, K. W., MALONE, E. M. & ROBERTSON, I. The effect of dietary cholesterol on cholesterol biosynthesis and other processes in mammalian liver 25P
BORGHETTI, A. F. *see* GUIDOTTI, G. G. 409
BOTHAM, K. M. & PENNOCK, J. F. The biosynthesis of tocopherols and related compounds in the blue–green alga *Anabaena variabilis* 127
BOYD, G. S. *see* HORNBY, G. M. 24P
BRAIDMAN, I. P. & ROSE, D. P. The effect of sex hormones on the activity of tryptophan oxygenase and other corticosteroid-inducible enzymes in rat liver 28P
BRETSCHER, M. S. The proteins of erythrocyte membranes: where are they? 40P
BROWN, M. *see* PARISH, J. H. 21P
BRUMBY, P. E. Influence of plasma lipids on the activity of lipoprotein lipase 10P
BRUNORI, M. *see* PHELPS, C. 79
BURGE, M. L. E. *see* NORRIS, K. A. 53P
BURGER, M. *see* ABOUD, M. 219
BUTLER, W. F. & WELS, C. M. Glycosaminoglycans of cat intervertebral disc 647
BUTTERY, P. J. & BOORMAN, K. N. The inhibition of urea synthesis by leucine in the perfused rat liver 55P
BYFIELD, P. G. H., CLARK, M. B., TURNER, K., NATHANSON, B M., FOSTER, G. V. & MACINTYRE, I. Immunochemical studies on human calcitonin M leading to information on the shape of the molecule 33P

CAMMACK, R. *see* RAO, K. K. 257
CARAFOLI, E. & LEHNINGER, A. L. A survey of the interaction of calcium ions with mitochondria from different tissues and species 681
CARLSON, L. A. Methods and problems in the study of plasma triglyceride metabolism in man 2P
CARNEGIE, P. R. Amino acid sequence of the basic protein of human brain myelin 65P
CARREL, S., THEILKÄS, L., MORELL, A., SKVARIL, F. & BARANDUN, S. Isolation of normal immunoglobulin E by means of an immunoadsorbent 405
CATTELL, K. J., LINDOP, C. R., KNIGHT, I. G. & BEECHEY, R. B. The identification of the site of action of dicyclohexylcarbodi-imide as a proteolipid in mitochondrial membranes 66P
CAZZULO, J. J., SUNDARAM, T. K., DILKS, S. N. & KORNBERG, H. L. Synthesis of pyruvate carboxylase from its apoenzyme and (+)-biotin in *Bacillus stearothermophilus*. Purification and properties of the apoenzyme and the holoenzyme synthetase 653

Cazzulo, J. J. *see also* Sundaram, T. K. 663
Chain, E. B. *see* Bassett, R. A. 58P
Chance, B. & Oshino, N. Kinetics and mechanisms of catalase in peroxisomes of the mitochondrial fraction 225
Chapman, P. J. *see* Hopper, D. J. 19, 29
Chittenden, G. J. F. *see* Garcia Trejo, A. 49
Clark, M. B. *see* Byfield, P. G. H. 33P
Clarke, N. *see* Dawson, R. M. C. 605
Cook, J. R. *see* Montague, W. 115
Corbett, K. *see* Bassett, R. A. 58P
Crawford, M. A., Crawford, S. M. & Hansen, I. B. Plasma structural lipids in groups at high and low risk to atherosclerosis 11P
Crawford, M. A., Lloyd, C. A. & Springett, L. V. Dietary alterations in polyunsaturated fatty acids in guinea-pig brain, liver and muscle 11P
Crawford, S. M. *see* Crawford, M. A. 11P
Cremer, J. E. Incorporation of label from D-β-hydroxy-[^{14}C]butyrate and [3-^{14}C]acetoacetate into amino acids in rat brain *in vivo* 135
Criss, W. E. *see* Filler, R. 553
Crumpton, M. J. Antigen–antibody interaction in the presence of sodium deoxycholate 52P
Crumpton, M. J. *see also* Allan, D. 15P
Curtis, P. J. Some properties of mitochondrial membrane proteins dissolved in chioroform–methanol 41P
Curzon, G. & Young, S. N. Relationships between kinetic properties and structure of caeruloplasmin substrates 32P
Cushman, S. W. *see* Jeanrenaud, B. 1P

Dagley, S. *see* Hopper, D. J. 29
Daniel, J. W. & Gage, J. C. The metabolism by rats of phenylmercury acetate 24P
Daniels, M. J. Some features of the bacterial membrane studied with the aid of a new fractionation technique 197
Darby, F. J. Changes in drug-metabolizing activities in the livers of suckling rats as a result of treatment of the lactating mothers with phenobarbitone and chlorpromazine 41
Davies, D. S. *see* Thorgeirsson, S. S. 30P
Davies, J. I. *see* Evans, W. C. 543
Davison, A. N. *see* Agrawal, H. C. 759; Banik, N. L. 751, 26P
Dawson, R. M. C., Freinkel, N., Jungalwala, F. B. & Clarke, N. The enzymic formation of *myo*inositol 1:2-cyclic phosphate from phosphatidylinositol 605
De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L. The substrate specificity of purine phosphoribosyltransferases in *Schizosaccharomyces pombe* 415
Dickinson, J. P. & Aparicio, S. G. R. Trypan Blue: reaction with myelin 65P
Dilks, S. N. *see* Cazzulo, J. J. 653
Di Mauro, S. *see* Margreth, A. 597
Dodgson, K. S. *see* Fitzgerald, J. W. 277; Rhodes, C. 575
Dolphin, P. J. *see* Ansari, A. Q. 107
Donninger, C., Nobbs, B. T. & Wilson, K. An enzyme catalysing the hydrolysis of phosphoric acid diesters in rat liver 51P
Dubois, F., Benedeczky, I. & Smith, A. D. Membrane-bound enzymes in adrenal medulla: an adenosine triphosphatase characteristic of the Golgi apparatus 46P

Eaglesham, A. R. J. & Hewitt, E. J. Kinetics and inhibition by adenosine phosphates and nitrite of nitrate reductase from *Spinacea oleracea* L. 18P
Earl, D. C. N. & Hindley, S. T. The rate-limiting step of protein synthesis *in vivo* and *in vitro* and the distribution of growing peptides between the puromycin-labile and puromycin-non-labile sites on polyribosomes 267
Eddy, A. A. & Nowacki, J. A. Stoicheiometrical proton and potassium ion movements accompanying the absorption of amino acids by the yeast *Saccharomyces carlsbergensis* 701
Edwards-Webb, J. D. *see* Ganguly, J. 235
Ellar, D. J., Thomas, T. D. & Posgate, J. A. Properties of mesosomal membranes isolated from *Micrococcus lysodeikticus* and *Bacillus megaterium* 44P
Ellwood, D. C. & Kirk, G. R. A. The occurrence of 6-deoxy-L-altrose in the lipopolysaccharide of *Yersinia enterocolitica* 14P
Endo, Y., Sato, S., Ishii, S. & Tamiya, N. The disulphide bonds of erabutoxin a, a neurotoxic protein of a sea-snake (*Laticauda semifasciata*) venom 463
Erickson, S. K. *see* Jones, C. W. 46P
Ersser, R. S., Seakins, J. W. T., Andrew, B. C. & Hughes, E. A. Some simple and rapid thin-layer chromatographic methods for clinical purposes 35P
Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I. Bacterial metabolism of 2,4-dichlorophenoxyacetate 543
Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N. Bacterial metabolism of 4-chlorophenoxyacetate 509
Evans, W. C. *see also* Gaunt, J. K. 519, 533; Orpin, C. G. 57P, 58P
Evans, W. H. *see* Gurd, J. W. 43P
Ewing, L. L. *see* Reddi, A. H. 333, 343

Fahmy, A. R. *see* Groom, M. 125
Farber, J., Rovera, G. & Baserga, R. Template activity of chromatin during stimulation of cellular proliferation in human diploid fibroblasts 189
Fernley, H. N. *see* Evans, W. C. 509, 543
Filler, R. & Criss, W. E. Development of adenylate kinase isoenzymes in rat liver 553
Fitzgerald, J. W. & Dodgson, K. S. Carbon and sulphur utilization during growth of *Pseudomonas fluorescens* on potassium D-glucose 6-*O*-sulphate as the sole sulphur source 277
Floreani, L. *see* Serafini-Fracassini, A. 101
Foster, G. V. *see* Byfield, P. G. H. 33P
Fowler, B., Sardharwalla, I. B. & Robins, A. J. The detection of heterozygotes for homocystinuria by oral loading with L-methionine 23P
Francis, M. J. O. & Macmillan, D. C. Extraction of polymeric collagen from human skin 34P
Freinkel, N. *see* Dawson, R. M. C. 605

Gage, J. C. *see* Daniel, J. W. 24P
Gamar, Y. & Gaunt, J. K. Bacterial metabolism of 4-chloro-2-methylphenoxyacetate. Formation of glyoxylate by side-chain cleavage 527
Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B. Studies on metabolism of vitamin A. The effect of vitamin A status on the secretion rates of some steroids into the ovarian-venous blood of pregnant rats 235
García, M. C. *see* R-Candela, J. L. 29P
Garcia Trejo, A., Haddock, J. W., Chittenden, G. J. F. & Baddiley, J. The biosynthesis of galactofuranosyl residues in galactocarolose 49
Garssen, G. J., Vliegenthart, J. F. G. & Boldingh, J. An anaerobic reaction between lipoxygenase, linoleic acid and its hydroperoxides 327
Gaunt, J. K. & Evans, W. C. Metabolism of 4-chloro-2-methylphenoxyacetate by a soil pseudomonad. Preliminary evidence for the metabolic pathway 519

GAUNT, J. K. & EVANS, W. C. Metabolism of 4-chloro-2-methylphenoxyacetate by a soil pseudomonad. Ring-fission, lactonizing and delactonizing enzymes 533
GAUNT, J. K. *see also* GAMAR, Y. 527
GAZZOLA, G. C. *see* GUIDOTTI, G. G. 409
GENT, W. L. G., GREGSON, N. A., LOVELIDGE, C. A. & WINDER, A. F. Interaction of lysophosphatidylcholine with central-nervous-system myelin 64P
GENT, W. L. G., GREGSON, N. A., LOVELIDGE, C. A. & WINDER, A. F. Protein content of myelin 49P
GENT, W. L. G., GREGSON, N. A., LOVELIDGE, C. A. & WINDER, A. F. Resolution of protein components in lysophosphatidylcholine-solubilized rat brain myelin 64P
GENT, W. L. G., GREGSON, N. A., LOVELIDGE, C. A. & WINDER, A. F. Separation of lipid–protein complexes of rat brain myelin by isopycnic centrifugation 63P
GENT, W. L. G., HASLEWOOD, G. A. D. & MONTESDEOCA, G. Macromolecular compounds of bilirubin in human bile 15P
GINGELL, R. *see* WALKER, R. 18P
GIORGI, P. P. Improved separation of viable neurons and glia from rat brain 50P
GOMPERTZ, D. The distribution of C_{17} fatty acids in the liver of a child with propionicacidaemia 13P
GORDON, A. H. *see* HOFFENBERG, R. 129
GOWER, D. B. *see* LOKE, K. H. 27P
GRANT, E. H., SOUTH, G. P., TAKASHIMA, S. & ICHIMURA, H. Dielectric dispersion in aqueous solutions of oxyhaemoglobin and carboxyhaemoglobin 691
GRANT, E. H., SOUTH, G. P. & WALKER, I. O. The dipole moment of myoglobin. 765
GRAY, W. J. H. & MIDGLEY, J. E. M. The control of ribonucleic acid synthesis in bacteria. The synthesis and stability of ribonucleic acid in rifampicin-inhibited cultures of *Escherichia coli* 161
GRAY, W. J. H. *see also* MIDGLEY, J. E. M. 149
GREEN, C. D., SKARDA, J. & BARRY, J. M. Is synthesis of glucose 6-phosphate dehydrogenase induced by a metabolite of glucose? 20P
GREEN, N. M. Possible modes of organization of protein molecules in membranes 37P
GREGORY, K. W. *see* BOOTH, R. 25P
GREGSON, N. A. *see* GENT, W. L. G. 49P, 63P, 64P
GRIFFITHS, K. *see* GROOM, M. 125
GROOM, M., HARPER, M. E., FAHMY, A. R., PIERREPOINT, C. G. & GRIFFITHS, K. The effect of oestrogen on the prostatic metabolism of testosterone in tissue culture 125
GUIDOTTI, G. G., BORGHETTI, A. F., LÜNEBURG, B. & GAZZOLA, G. C. Kinetic analysis of insulin action on amino acid uptake by isolated chick embryo heart cells 409
GURD, J. W., EVANS, W. H. & PERKINS, H. R. Fractionation of the proteins of liver plasma membranes 43P

HADDOCK, J. W. *see* GARCIA TREJO, A. 49
HALES, C. N. *see* STEIN, J. M. 13P
HALL, D. O. *see* RAO, K. K. 257
HALL, J. G. *see* NIMMO, I. A. 55P
HANSEN, I. B. *see* CRAWFORD, M. A. 11P
HARDMAN, N. *see* BARKER, G. R. 48P
HARKNESS, R. A. *see* MACDONALD, B. S. 26P
HARPER, M. E. *see* GROOM, M. 125
HARRIS, J. R. The proteins released from intact erythrocyte 'ghosts' at low ionic strength 38P
HASLEWOOD, G. A. D. *see* GENT, W. L. G. 15P
HAWKINS, R. A., WILLIAMSON, D. H. & KREBS, H. A. Ketone-body utilization by adult and suckling rat brain *in vivo* 13
HAWKS, A. *see* PEGG, A. E. 121
HAWKSWORTH, G. & HILL, M. J. The formation of nitrosamines by human intestinal bacteria 28P
HAWTHORNE, J. N. *see* LAPETINA, E. G. 171
HEINDEL, J.-J. *see* JEANRENAUD, B. 1P
HENSON, P. & WALKER, I. O. Effect of proteolytic enzymes on deoxyribonucleohistone 22P
HESLOT, H. *see* DE GROODT, A. 415
HEWICK, D. S. & BECKETT, A. H. The metabolism *in vitro* of phenothiazine drugs 59P
HEWITT, E. J. *see* EAGLESHAM, A. R. J. 18P
HICKS, R. M. *see* KETTERER, B. 66P
HILL, C. M. *see* BARDSLEY, W. G. 557
HILL, M. J. *see* HAWKSWORTH, G. 28P
HINDLEY, S. T. *see* EARL, D. C. N. 267
HINTON, R. H. *see* NORRIS, K. A. 53P
HODGKINSON, A. & NORDIN, B. E. C. Physical chemistry of calcium stone formation 5P
HOFFENBERG, R., GORDON, A. H. & BLACK, E. G. Albumin synthesis by the perfused rat liver. A comparison of methods with special reference to the effect of dietary protein deprivation 129
HÖGBERG, B. *see* RHODES, C. 575
HOHENWALLNER, W. *see* HÖRTNAGL, H. 299
HOPE, D. B. *see* NORSTRÖM, A. 671; PICKUP, J. C. 31P
HOPPER, D. J. & CHAPMAN, P. J. Gentisic acid and its 3- and 4-methyl-substituted homologues as intermediates in the bacterial degradation of *m*-cresol, 3,5-xylenol and 2,5-xylenol 19
HOPPER, D. J., CHAPMAN, P. J. & DAGLEY, S. The enzymic degradation of alkyl-substituted gentisates, maleates and malates 29
HORNBY, G. M. & BOYD, G. S. C_{29}-carboxylic acid intermediates of cholesterol biosynthesis in rat liver 24P
HÖRTNAGL, H., WINKLER, H., SCHÖPF, J. A. L. & HOHENWALLNER, W. Membranes of chromaffin granules. Isolation and partial characterization of two proteins 299
HOUSE, W. L. *see* LAWLEY, P. D. 22P
HUGHES, E. A. *see* ERSSER, R. S. 35P
HULME, E. C. & TIPTON, K. F. The isotope-exchange reactions of ox heart phosphofructokinase 181

ICHIMURA, H. *see* GRANT, E. H. 691
ISHII, S. *see* ENDO, Y. 463
ITZHAKI, R. F. Studies on the accessibility of deoxyribonucleic acid in deoxyribonucleoprotein to cationic molecules 583

JEANRENAUD, B., TOUABI, M., CUSHMAN, S. W. & HEINDEL, J.-J. Insulin, amino acid metabolism and lipolysis in isolated fat-cells 1P
JOHNSON, A. H. & BAKER, J. R. Glycosaminoglycans of hen's-egg white 16P
JOHNSON, C. E. *see* RAO, K. K. 257
JOHNSON, M. K. Solubilization procedures cause changes in the response of brain 'neurotoxic esterase' to inhibitors 51P
JONES, C. W., ERICKSON, S. K. & ACKRELL, B. A. C. Control of respiration in *Azotobacter vinelandii* membranes 46P
JONES, J. M. Studies on chicken actomyosin 61P
JUNGALWALA, F. B. *see* DAWSON, R. M. C. 605

KACZMAREK, L. K. *see* AGRAWAL, H. C. 759
KELLY, P. G. *see* MADDY, A. H. 62P
KETTERER, B. & BEALE, D. Amino-azo-dye-binding protein in the soluble cytoplasm of the rat liver 53P
KETTERER, B. & HICKS, R. M. Proteins of the plasma membrane lining the lumen of the rat bladder 66P
KHAN, I. A. & RAHMAN, M. A. Studies on aetiology of urolithiasis in Karachi 22P

KIKUTANI, M. *see* SWISLOCKI, N. I. 633
KINGHAM, B., RILEY, S. P. & ROBSON, A. The extraction of a protein fraction rich in glycine, serine, tyrosine and phenylalanine from Merino wool 60P
KIRK, G. R. A. *see* ELLWOOD, D. C. 14P
KITSON, T. M. & KNOWLES, J. R. The inhibition of pepsin-catalysed reactions by structural and stereochemical product analogues 241
KITSON, T. M. & KNOWLES, J. R. The pathway of pepsin-catalysed transpeptidation. Evidence for the reactive species being the anion of the acceptor molecule 249
KNIGHT, I. G. *see* CATTELL, K. J. 66P
KNIGHT, M. *see* ORPIN, C. G. 57P, 58P
KNOWLES, J. R. *see* KITSON, T. M. 241, 249
KNOWLES, P. F. *see* TAYLOR, C. 29P
KORNBERG, H. L. *see* CAZZULO, J. J. 653; SUNDARAM, T. K. 663
KREBS, H. A. *see* HAWKINS, R. A. 13

LAGNADO, J. R., LYONS, C. & WICKREMASINGHE, G. The subcellular distribution of colchicine-binding protein(s) ('microtubule protein') in rat brain 56P
LAKSHMANAN, M. R. *see* NARINDRASORASAK, S. 427
LAPETINA, E. G. & HAWTHORNE, J. N. The diglyceride kinase of rat cerebral cortex 171
LA PLACA, M. *see* STIRPE, F. 347
LAWLEY, P. D., SHOOTER, K. V., HOUSE, W. L. & SHAH, S. A. Methylation of μ2 bacteriophage ribonucleic acid by the carcinogen *N*-methyl-*N*-nitrosourea: evidence for *O*-methylation 22P
LAZIER, C. B. *see* ANSARI, A. Q. 107
LEE, J. J. *see* MACCOLL, R. 421
LEHNINGER, A. L. *see* CARAFOLI, E. 681
LEWIN, S. Some aspects of the effects of electrostatic attraction and of water-entropy changes on the helical stability of deoxyribonucleic acid 20P
LEWIN, S. Stereochemical and energetic evaluation of the phosphorylation of histones in chromatin 47P
LEWIN, S. & STOW, J. R. Some aspects of the effect of deuterium oxide (D_2O) substitution for water (H_2O) on the helical stability of yeast transfer ribonucleic acid 48P
LEWIS, B. Nutritional and endocrine factors influencing plasma triglyceride metabolism 3P
LINDOP, C. R. *see* CATTELL, K. J. 66P
LIVETT, B. G. *see* NORSTRÖM, A. 671
LLOYD, C. A. *see* CRAWFORD, M. A. 11P
LOKE, K. H. & GOWER, D. B. Further studies on the biosynthesis of androsta-5,16-dien-3β-ol and the subcellular location of the site of biosynthesis 27P
LOVELIDGE, C. A. *see* GENT, W. L. G. 49P, 63P, 64P
LÜNEBURG, B. *see* GUIDOTTI, G. G. 409
LYONS, C. *see* LAGNADO, J. R. 56P

MACCOLL, R., LEE, J. J. & BERNS, D. S. Protein aggregation in C-phycocyanin. Studies at very low concentrations with the photoelectric scanner of the ultracentrifuge 421
MACDONALD, B. S., SYKES, P. J., ADHIKARY, P. M. & HARKNESS, R. A. The identification of 17α-hydroxy-17β-methylandrosta-1,4-dien-3-one as a metabolite of 17β-hydroxy-17α-methylandrosta-1,4-dien-3-one in man 26P
MACINTYRE, I. *see* BYFIELD, P. G. H. 33P
MCLEAN, A. E. M. *see* MARSHALL, W. J. 569
MACMILLAN, D. C. *see* FRANCIS, M. J. O. 34P
MACRAE, A. R. Isolation and properties of a 'malic' enzyme from cauliflower bud mitochondria 495
MADDY, A. H. & KELLY, P. G. Factors affecting the interactions of proteins isolated from erythrocyte membranes 62P
MAJUMDAR, M. K. & MAJUMDAR, S. K. Relationship between alkaline phosphatase and neomycin formation in *Streptomyces fradiae* 397
MAJUMDAR, S. K. *see* MAJUMDAR, M. K. 397
MALONE, E. M. *see* BOOTH, R. 25P
MARGRETH, A., DI MAURO, S., TARTARINI, A. & SALVIATI, G. Glycogen synthetase in developing and adult skeletal muscle 597
MARR, A. M. S., NEUBERGER, A. & RATCLIFFE, W. A. Rabbit Tamm–Horsfall urinary glycoprotein. Chemical composition and subunit structure 623
MARSHALL, W. J. & MCLEAN, A. E. M. A requirement for dietary lipids for induction of cytochrome *P*-450 by phenobarbitone in rat liver microsomal fraction 569
MEGO, J. L. The effect of pH on cathepsin activities in mouse liver heterolysosomes 445
MIDGLEY, J. E. M. & GRAY, W. J. H. The control of ribonucleic acid synthesis in bacteria. The synthesis and stability of ribonucleic acid in chloramphenicol-inhibited cultures of *Escherichia coli* 149
MIDGLEY, J. E. M. *see also* AVERY, R. J. 139; GRAY, W. J. H. 161
MILLER, J. C. & WALEY, S. G. Amino acid sequences around the cysteine residues of rabbit muscle triose phosphate isomerase 209
MILNE, M. D. Amino acid metabolism in cystinuria 9P
MILNER-WHITE, E. J. & WATTS, D. C. Inhibition of adenosine 5′-triphosphate–creatine phosphotransferase by substrate–anion complexes. Evidence for the transition-state organization of the catalytic site 727
MONTAGUE, W. & COOK, J. R. The role of adenosine 3′:5′-cyclic monophosphate in the regulation of insulin release by isolated rat islets of Langerhans 115
MONTESDEOCA, G. *see* GENT, W. L. G. 15P
MORELL, A. *see* CARREL, S. 405
MOSS, D. W. *see* MÜLLER, E. 31P; THOMAS, D. M. 30P
MOSS, P. *see* EVANS, W. C. 509
MULDER, I. Changes in fatty acid patterns in bovine plasma 12P
MÜLLER, E., PEARSE, A. G. E. & MOSS, D. W. Characterization of an alkaline phosphatase from rat heart 31P
MUNDAY, K. A. *see* ANSARI, A. Q. 107
MYANT, N. B. The metabolism of plasma cholesterol 2P

NARINDRASORASAK, S., PIMPA, P. & LAKSHMANAN, M. R. The metabolism of retinyl methyl ether in the rat *in vivo* 427
NATHANSON, B. M. *see* BYFIELD, P. G. H. 33P
NERY, R. Some new aspects of the metabolism of phenacetin in the rat 317
NERY, R. The binding of radioactive label from labelled phenacetin and related compounds to rat tissues *in vivo* and to nucleic acids and bovine plasma albumin *in vitro* 311
NERY, R. The metabolic interconversion of arecoline and arecoline 1-oxide in the rat 503
NEUBERGER, A. *see* MARR, A. M. S. 623
NIETO, A. *see* R-CANDELA, J. L. 29P
NIMMO, I. A. & HALL, J. G. Differences in the permeability of bovine erythrocytes to fructose 55P
NOBBS, B. T. *see* DONNINGER, C. 51P
NORDIN, B. E. C. *see* HODGKINSON, A. 5P
NORRIS, K. A., BURGE, M. L. E. & HINTON, R. H. Phosphodiesterase and ribonuclease activities of the plasma membrane of rat liver and hepatoma 53P
NORSTRÖM, A., SJÖSTRAND, J., LIVETT, B. G., UTTENTHAL, L. O. & HOPE, D. B. Electrophoretic and immunological characterization of rat neurophysin 671
NOWACKI, J. A. *see* EDDY, A. A. 701

Olavesen, A. H. *see* Rhodes, C. 575
Ord, M. G. *see* Pawse, A. R. 713; Siebert, G. 721
Orpin, C. G., Knight, M. & Evans, W. C. The bacterial oxidation of *N*-methylisonicotinate 58P
Orpin, C. G., Knight, M. & Evans, W. C. The bacterial oxidation of picolinamide 57P
Oshino, N. *see* Chance, B. 225
Owens, D. *see* Tanner, M. J. A. 40P

Padmanaban, G. *see* Rao, M. R. S. 593
Palmer, J. M. & Passam, H. C. The oxidation of exogenous reduced nicotinamide–adenine dinucleotide by plant mitochondria 16P
Parish, J. H., Bashar, S. A. M. K. & Brown, M. Biosynthesis *in vitro* of tryptophanase with polyribosomes from *Escherichia coli* 21P
Parkin, B. H. An improved method for the electrophoresis of enzymes using a polyacrylamide–starch gel 61P
Passam, H. C. *see* Palmer, J. M. 16P
Pawse, A. R., Ord, M. G. & Stocken, L. A. Histone kinase and cell division 713
Pearse, A. G. E. *see* Müller, E. 31P
Pegg, A. E. & Hawks, A. Increased transfer ribonucleic acid methylase activity in tumours induced in the mouse colon by the administration of 1,2-dimethylhydrazine 121
Pennock, J. F. *see* Botham, K. M. 127
Perkins, H. R. *see* Gurd, J. W. 43P
Phelps, C., Antonini, E. & Brunori, M. The binding of cyanide to ferroperoxidase 79
Philpot, G. R. The uptake of calcium from urine *in vitro* by powdered phosphates and oxalates 23P
Pickup, J. C. & Hope, D. B. Protease and ribonuclease activities in bovine pituitary lobes 31P
Pierrepoint, C. G. *see* Groom, M. 125
Pimpa, P. *see* Narindrasorasak, S. 427
Pogson, C. I. *see* Reynolds, S. J. 285
Poirier, L. *see* De Groodt, A. 415
Pollitt, R. J. & Stonier, P. D. Proteins of normal hair and of cystine-deficient hair from mentally retarded siblings 433
Pope, G. S. *see* Ganguly, J. 235
Posgate, J. A. *see* Ellar, D. J. 44P
Price, R. G. *see* Taylor, D. G. 641

Radda, G. K. Enzyme and membrane conformation in biochemical control. The seventh Colworth Medal Lecture 385
Rahman, M. A. *see* Khan, I. A. 22P
Ramasarma, T. *see* Ranganathan, S. 487
Ranganathan, S. & Ramasarma, T. Enzymic formation of *p*-hydroxybenzoate from *p*-hydroxycinnamate 487
Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E. Mössbauer effect in *Scenedesmus* and spinach ferredoxins. The mechanism of electron transfer in plant-type iron–sulphur proteins 257
Rao, M. R. S. & Padmanaban, G. δ-Aminolaevulate synthetase induction and catalase repression by porphyrinogenic drugs 593
Ratcliffe, W. A. *see* Marr, A. M. S. 623
R-Candela, J. L., García, M. C. & Nieto, A. Effect of glucagon on spheroplasts of *Escherichia coli* 29P
Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G. Hormonal influences on adenosine 3′:5′-cyclic monophosphate-stimulated protein phosphokinase reactions in mammalian reproductive organs. *Appendix to:* Protein phosphokinase reactions in mammalian testis. Stimulatory effects of adenosine 3′:5′-cyclic monophosphate on the phosphorylation of basic proteins (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 343
Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G. Protein phosphokinase reactions in mammalian testis. Stimulatory effects of adenosine 3′:5′-cyclic monophosphate on the phosphorylation of basic proteins 333
Reynolds, S. J., Yates, D. W. & Pogson, C. I. Dihydroxyacetone phosphate. Its structure and reactivity with α-glycerophosphate dehydrogenase, aldolase and triose phosphate isomerase and some possible metabolic implications 285
Rhodes, C., Dodgson, K. S., Olavesen, A. H. & Högberg, B. Unsuitability of indoxyl acetate as a substrate for the assay of testicular hyaluronidase 575
Riley, S. P. *see* Kingham, B. 60P
Rita, G. A. *see* Baccino, F. M. 363
Robertson, I. *see* Booth, R. 25P
Robins, A. J. *see* Fowler, B. 23P
Robinson, D. *see* Taylor, D. G. 641
Robinson, D. S. Regulation of plasma triglyceride utilization 2P
Robson, A. *see* Kingham, B. 60P
Rose, D. P. *see* Braidman, I. P. 28P
Rose, F. A. & Bleszynski, W. S. The metabolism of 5-hydroxytryptamine *O*[^{35}S]-sulphate in the rat 601
Rose, G. *see* Bar-Tana, J. 353
Rovera, G. *see* Farber, J. 189

Sajdera, S. W. *see* Ali, S. Y. 56P
Salaman, M. R. & Williamson, A. R. Isoelectric focusing of proteins in the native and denatured states. Anomalous behaviour of plasma albumin 93
Salviati, G. *see* Margreth, A. 597
Sardharwalla, I. B. *see* Fowler, B. 23P
Sato, S. & Tamiya, N. The amino acid sequences of erabutoxins, neurotoxic proteins of sea-snake (*Laticauda semifasciata*) venom 453
Sato, S. *see also* Endo, Y. 463
Schöpf, J. A. L. *see* Hörtnagl, H. 299
Scopes, R. K. An improved procedure for the isolation of 3-phosphoglycerate kinase from yeast 89
Seakins, J. W. T. *see* Ersser, R. S. 35P
Serafini-Fracassini, A., Stimson, W. H. & Floreani, L. The subunits of chemically treated proteoglycan isolated from bovine nasal cartilage 101
Shah, S. A. *see* Lawley, P. D. 22P
Shall, S., Baseer, A. & Waheed, A. The mechanism of action of yeast invertase 19P
Shapiro, B. *see* Bar-Tana, J. 353
Shooter, K. V. *see* Lawley, P. D. 22P
Siebert, G., Ord, M. G. & Stocken, L. A. Histone phosphokinase activity in nuclear and cytoplasmic cell fractions from normal and regenerating rat livers 721
Sjöstrand, J. *see* Norström, A. 671
Skarda, J. *see* Green, C. D. 20P
Skvaril, F. *see* Carrel, S. 405
Smith, A. D. *see* Dubois, F. 46P
Smith, B. S. W. *see* Evans, W. C. 509, 543
Smith, T. A. & Stevens, R. A. J. Polyamine oxidase in higher plants 17P
Sonenberg, M. *see* Swislocki, N. I. 633
Sorger, G. J. Effect of nitrogenase components from mutant and wild-type strains of *Azotobacter* on the dilution effect of nitrogenase 305
South, G. P. *see* Grant, E. H. 691, 765
Spanner, S. *see* Ansell, G. B. 741
Springett, L. V. *see* Crawford, M. A. 11P
Stein, J. M. & Hales, C. N. The effect of adrenaline and of α- and β-adrenergic blocking agents on ^{32}P incorporation into fat-cell phospholipids 13P
Stevens, R. A. J. *see* Smith, T. A. 17P
Stimson, W. H. *see* Serafini-Fracassini, A. 101

STIRPE, F. & LA PLACA, M. Thymidine kinase of rat liver. Activation by phospholipase C and subcellular distribution in the liver 347
STOCKEN, L. A. *see* PAWSE, A. R. 713; SIEBERT, G. 721
STONIER, P. D. *see* POLLITT, R. J. 433
STOW, J. R. *see* LEWIN, S. 48P
SUGANO, M. Phosphatidylcholine–cholesterol acyltransferase in the ultracentrifugal residual protein fraction of rat plasma 469
SUNDARAM, T. K., CAZZULO, J. J. & KORNBERG, H. L. Synthesis of pyruvate carboxylase from its apoenzyme and (+)-biotin in *Bacillus stearothermophilus*. Mechanism and control of the reaction 663
SUNDARAM, T. K. *see also* CAZZULO, J. J. 653
SUNDARESAN, P. R. & BHAGAVAN, H. N. Metabolic studies on retinoic acid in the rat 1
SUTOR, D. J. Crystallographic studies on the formation of renal calculi 6P
SWISLOCKI, N. I., SONENBERG, M. & KIKUTANI, M. Metabolic effects of the major component of bovine growth hormone 633
SYKES, P. J. *see* MACDONALD, B. S. 26P

TAKASHIMA, S. *see* GRANT, E. H. 691
TALUKDER, M. Q.-K. *see* BELL, D. J. 24P
TAMIYA, N. *see* ENDO, Y. 463; SATO, S. 453
TANNER, M. J. A. & OWENS, D. Separation and partial characterization of some human erythrocyte membrane protein components 40P
TAO, T. Rotational mobility of a fluorescent rhodopsin derivative in the rod outer-segment membrane 54P
TARTARINI, A. *see* MARGRETH, A. 597
TAYLOR, C. & KNOWLES, P. F. A catalytic mechanism for pig plasma benzylamine oxidase 29P
TAYLOR, D. G., PRICE, R. G. & ROBINSON, D. The distribution of some hydrolases in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation 641
TEE, D. E. H. *see* WATKINS, J. 33P
THEILKÄS, L. *see* CARREL, S. 405
THOMAS, D. M. & MOSS, D. W. The electrophoretic mobilities of native and chemically modified human placental alkaline phosphatase isoenzymes 30P
THOMAS, T. D. *see* ELLAR, D. J. 44P
THOMPSON, S. Y. *see* GANGULY, J. 235
THORGEIRSSON, S. S. & DAVIES, D. S. Kinetic studies of the *N*-demethylation of ethylmorphine by a cytochrome *P*-450-dependent enzyme system in human liver microsomes 30P
THORNE, K. J. I. & BARKER, D. C. The bactoprenol content of plasma and mesosome membranes from *Lactobacillus casei* 45P
TIPTON, K. F. *see* HULME, E. C. 181
TOOTHILL, J. *see* GANGULY, J. 235
TOUABI, M. *see* JEANRENAUD, B. 1P
TRENTHAM, D. R. Rate-determining processes and the number of simultaneously active sites of D-glyceraldehyde 3-phosphate dehydrogenase 71
TRENTHAM, D. R. Reactions of D-glyceraldehyde 3-phosphate dehydrogenase facilitated by oxidized nicotinamide–adenine dinucleotide 59
TURNER, K. *see* BYFIELD, P. G. H. 33P
TWOSE, T. M. *see* BARKER, G. R. 48P, 49P

UTTENTHAL, L. O. *see* NORSTRÖM, A. 671

VAN DEENEN, L. L. M. *see* ZWAAL, R. F. A. 62P
VLIEGENTHART, J. F. G. *see* GARSSEN, G. J. 327

WAHEED, A. *see* SHALL, S. 19P
WALEY, S. G. *see* MILLER, J. C. 209
WALKER, I. O. *see* GRANT, E. H. 765; HENSON, P. 22P
WALKER, R. & GINGELL, R. An assay for azo-reductase activity in micro-organisms 18P
WASTESON, Å. Properties of fractionated chondroitin sulphate from ox nasal septa 477
WATKINS, J. & TEE, D. E. H. Patterns of serum γG-globulin heterogeneity in health, rheumatoid arthritis and cancer 33P
WATTS, D. C. *see* MILNER-WHITE, E. J. 727
WATTS, R. W. E. Primary hyperoxaluria 7P
WAYNFORTH, H. B. *see* GANGULY, J. 235
WELS, C. M. *see* BUTLER, W. F. 647
WESSLER, E. The nature of the non-ultrafilterable glycosaminoglycans of normal human urine 373
WHELAN, W. J. Enzymic explorations of the structures of starch and glycogen. The fourth CIBA Medal Lecture 609
WHITEHEAD, E. P. *see* DE GROODT, A. 415
WICKREMASINGHE, G. *see* LAGNADO, J. R. 56P
WILLIAMS-ASHMAN, H. G. *see* REDDI, A. H. 333, 343
WILLIAMSON, A. R. *see* SALAMAN, M. R. 93
WILLIAMSON, D. H. *see* HAWKINS, R. A. 13
WILSON, K. *see* DONNINGER, C. 51P
WINDER, A. F. *see* GENT, W. L. G. 49P, 63P, 64P
WINKLER, H. *see* HÖRTNAGL, H. 299
WRONG, O. M. The metabolic basis of uric acid stone formation 9P

YATES, D. W. *see* REYNOLDS, S. J. 285
YOUNG, S. N. *see* CURZON, G. 32P

ZURETTI, M. F. *see* BACCINO, F. M. 363
ZWAAL, R. F. A. & VAN DEENEN, L. L. M. Recombination *in vitro* of proteins and lipids from mammalian erythrocyte membranes 62P

Index of Subjects

Note. Pages in *Proceedings of the Biochemical Society* are distinguished by P.

Acetamide, excretion of, as a metabolite of phenacetin in urine of the rat (Nery, R.) 317

[3-^{14}C]Acetoacetate, incorporation of label from D-3-hydroxy[^{14}C]butyrate and, into amino acids in rat brain *in vivo* (Cremer, J. E.) 135

Acetoacetate, utilization of, *in vivo* by brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13

Acetylcholine, lack of effect of, on the activity of diglyceride kinase of rat cerebral cortex (Lapetina, E. G. & Hawthorne, J. N.) 171

N-Acetyl-*S*-2-(4-ethoxyacetanilido)cysteine *S*-oxide, excretion of, as a metabolite of phenacetin in urine of the rat (Nery, R.) 317

N-Acetyl-*S*-ethylcysteine, excretion of, as a metabolite of phenacetin in urine of the rat (Nery, R.) 317

N-Acetyl-β-glucosaminidase, distribution of, in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641

N-Acetyl-β-glucosaminidase, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363

N-Acetyl-L-phenylalanyl-L-phenylalanylglycine, inhibition of the pepsin-catalysed hydrolysis of, by structural and stereochemical product analogues (Kitson, T. M. & Knowles, J. R.) 241

Acid deoxyribonuclease, *see* Deoxyribonuclease, acid

Acid phosphatase, *see* Phosphatase, acid

Acid proteinase, *see* Proteinase, acid

Acid ribonuclease, *see* Ribonuclease, acid

Actomyosin, chicken, properties of (Jones, J. M.) 61P

Adenine phosphoribosyltransferase, substrate specificity of, in *Schizosaccharomyces pombe* (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415

Adenosine 3′:5′-cyclic monophosphate, hormonal influences on protein phosphokinase reactions stimulated by, in rat reproductive organs (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 343

Adenosine 3′:5′-cyclic monophosphate, role of, in the regulation of insulin release by isolated rat islets of Langerhans (Montague, W. & Cook, J. R.) 115

Adenosine 3′:5′-cyclic monophosphate, stimulation by, of the phosphorylation of basic proteins by protein phosphokinase in rat testis preparations (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 333

Adenosine diphosphate, isotope-exchange reaction between adenosine triphosphate and, catalysed by ox heart phosphofructokinase (Hulme, E. C. & Tipton, K. F.) 181

Adenosine triphosphatase, demonstration of, characteristic of the Golgi apparatus in the adrenal medulla (Dubois, F., Benedeczky, I. & Smith, A. D.) 46P

Adenylate kinase, changes in the activities of isoenzymes of, in rat liver during development (Filler, R. & Criss, W. E.) 553

Adipocytes, isolated, insulin, amino acid metabolism and lipolysis in (Jeanrenaud, B., Touabi, M., Cushman, S. W. & Heindel, J.-J.) 1P

Adipose tissue, epididymal, rat, metabolic effects *in vitro* of the major component of ox growth hormone on (Swislocki, N. I., Sonenberg, M. & Kikutani, M.) 633

Adrenal glands, isolation and partial characterization of two proteins from membranes of chromaffin granules from, of ox, horse, pig and man (Hörtnagl, H., Winkler, H., Schöpf, J. A. L. & Hohenwallner, W.) 299

Albumin, comparison of methods used to study the biosynthesis of, by perfused rat liver with special reference to the effect of dietary protein deprivation (Hoffenberg, R., Gordon, A. H. & Black, E. G.) 129

Albumin, plasma, ox, anomalous behaviour of, during isoelectric focusing in the presence of urea (Salaman, M. R. & Williamson, A. R.) 93

Albumin, plasma, ox, binding of radioactive label from labelled phenacetin and related compounds to, *in vitro* (Nery, R.) 311

Aldolase, *see* Fructose diphosphate aldolase

Alkaline phosphatase, *see* Phosphatase, alkaline

Alloxan-diabetes, *see* Diabetes, alloxan-

Amino acid composition, carbohydrate and, of Tamm–Horsfall glycoprotein from rabbit urine (Marr, A. M. S., Neuberger, A. & Ratcliffe, W. A.) 623

Amino acid composition of protein fractions from normal human hair and from cystine-deficient hair from mentally retarded siblings (Pollitt, R. J. & Stonier, P. D.) 433

Amino acid sequences around the cysteine residues of rabbit skeletal-muscle triose phosphate isomerase (Miller, J. C. & Waley, S. G.) 209

Amino acid sequences of erabutoxin a and erabutoxin b from sea-snake (*Laticauda semifasciata*) venom (Sato, S. & Tamiya, N.) 453

Amino acids, incorporation of label from D-3-hydroxy-[^{14}C]butyrate and [3-^{14}C]acetoacetate into, in rat brain *in vivo* (Cremer, J. E.) 135

Amino acids, kinetic analysis of insulin action on the uptake of, by isolated chick-embryo heart cells (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409

Amino acids, stoicheiometrical proton and potassium ion movements accompanying the absorption of, by *Saccharomyces carlsbergensis* (Eddy, A. A. & Nowacki, J. A.) 701

Aminoalkyl-onium compounds, synthesis of, and their oxidation by pig kidney diamine oxidase (Bardsley, W. G., Ashford, J. S. & Hill, C. M.) 557

δ-Aminolaevulate synthetase, induction of, in rat liver by porphyrinogenic drugs (Rao, M. R. S. & Padmanaban, G.) 593

Amylo-1,6-glucosidase, role of, in the catabolism of glycogen (Whelan, W. J.) 609

Amylopectin, structure and metabolism of (Whelan, W. J.) 609

Amylopectinosis (glycogen-storage disease type IV), enzymic origin of the glycogen present in subjects suffering from (Whelan, W. J.) 609

Anabaena variabilis, biosynthesis of tocopherols and related compounds in (Botham, K. M. & Pennock, J. F.) 127

Anabaena variabilis, effects of concentration and other parameters on protein aggregation in C-phycocyanin isolated from (MacColl, R., Lee, J. J. & Berns, D. S.) 421

Androsta-5,16-dien-3β-ol, subcellular location of the site of biosynthesis of (Loke, K. H. & Gower, D. B.) 27P

1-Anilinonaphthalene-8-sulphonate, use of, as a fluorescent probe for the study of conformational changes in enzymes and membranes (Radda, G. K.) 385
Anions, inhibition of creatine kinase by complexes of substrate and (Milner-White, E. J. & Watts, D. C.) 727
Antigen–antibody interaction in the presence of sodium deoxycholate (Crumpton, M. J.) 52P
Arecoline, metabolic interconversion of arecoline 1-oxide and, in the rat (Nery, R.) 503
Arecoline 1-oxide, metabolic interconversion of arecoline and, in the rat (Nery, R.) 503
Atherosclerosis, plasma structural lipids in groups at high risk and at low risk to (Crawford, M. A., Crawford, S. M. & Hansen, I .B.) 11P
Azo reductase, assay of the activity of, in micro-organisms (Walker, R. & Gingell, R.) 18P
Azoferredoxin, evidence that the dilution effect of nitrogenase from *Azotobacter vinelandii* is due to limiting amounts of (Sorger, G. J.) 305
Azotobacter vinelandii, effect of nitrogenase components from mutant and wild-type strains of, on the dilution effect of nitrogenase (Sorger, G. J.) 305

Bacillus megaterium KM, use of a new technique for the fractionation of membranes of (Daniels, M. J.) 197
Bacillus stearothermophilus, mechanism and control of the reaction catalysed by pyruvate carboxylase holoenzyme synthetase from (Sundaram, T. K., Cazzulo, J. J. & Kornberg, H. L.) 663
Bacillus stearothermophilus, purification and properties of pyruvate carboxylase apoenzyme and of pyruvate carboxylase holoenzyme synthetase from (Cazzulo, J. J., Sundaram, T. K., Dilks, S. N. & Kornberg, H. L.) 653
Bacillus subtilis 168, biosynthesis of ribosomal ribonucleic acid in (Avery, R. J. & Midgley, J. E. M.) 139
Bacillus subtilis 168, use of a new technique for the fractionation of membranes of (Daniels, M. J.) 197
Benzylamine oxidase, catalytic mechanism for, from pig plasma (Taylor, C. & Knowles, P. F.) 29P
Bilirubin, macromolecular compounds of, in human bile (Gent, W. L. G., Haslewood, G. A. D. & Montesdeoca, G.) 15P
(+)-Biotin, mechanism and control of the synthesis of pyruvate carboxylase holoenzyme from the apoenzyme and, in *Bacillus stearothermophilus* (Sundaram, T. K., Cazzulo, J. J. & Kornberg, H. L.) 663
Biotin, purification and properties of pyruvate carboxylase apoenzyme and of pyruvate carboxylase holoenzyme synthetase from *Bacillus stearothermophilus* deficient in (Cazzulo, J. J., Sundaram, T. K., Dilks, S. N. & Kornberg, H. L.) 653
Bladder, rat, binding of radioactive label from labelled phenacetin to, *in vivo* (Nery, R.) 311
Blood, ovarian-venous, effect of vitamin A status on the secretion rates of some steroids into, of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Brain cortex, rat, subcellular distribution and properties of diglyceride kinase of (Lapetina, E. G. & Hawthorne, J. N.) 171
Brain, rat, adult and suckling, utilization of ketone bodies by, *in vivo* (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
Brain, rat, developing, exchange of sterols between myelin and other membranes of (Banik, N. L. & Davison, A. N.) 751
Brain, rat, developing, subcellular distribution of taurine and cysteinesulphinate decarboxylase in (Agrawal, H. C., Davison, A. N. & Kaczmarek, L. K.) 759
Brain, rat, improved separation of viable neurons and glia from (Giorgi, P. P.) 50P
Brain, rat, incorporation of label from D-3-hydroxy-[^{14}C]butyrate and [3-^{14}C]acetoacetate into amino acids in, *in vivo* (Cremer, J. E.) 135
Brain, rat, origin of choline found in (Ansell, G. B. & Spanner, S.) 741

Cadmium lauroylsuccinate, binding of bacterial membranes to, and their subsequent resolution into lipoprotein fractions by elution (Daniels, M. J.) 197
Caeruloplasmin, relationships between kinetic properties and structure of substrates for (Curzon, G. & Young, S. N.) 32P
Calcitonin M, human, immunochemical studies on, leading to information on the shape of the molecule (Byfield, P. G. H., Clark, M. B., Turner, K., Nathanson, B. M., Foster, G. V. & MacIntyre, I.) 33P
Calcium ions, interaction of, with mitochondria from different tissues and species (Carafoli, E. & Lehninger, A. L.) 681
Calcium stones, urinary, physical chemistry of the formation of (Hodgkinson, A. & Nordin, B. E. C.) 5P
Calcium-binding glycolipophosphoprotein, oestrogen-induced, chemical composition of, from *Xenopus laevis* (Ansari, A. Q., Dolphin, P. J., Lazier, C. B., Munday, K. A. & Akhtar, M.) 107
Calculi, renal, crystallographic studies on the formation of (Sutor, D. J.) 6P
Calculi, urinary, biochemistry of the formation of (Colloquium) 5P
Carbohydrate composition, amino acid and, of Tamm–Horsfall glycoprotein from rabbit urine (Marr, A. M. S., Neuberger, A. & Ratcliffe, W. A.) 623
Carboxyhaemoglobin, dielectric dispersion in aqueous solutions of (Grant, E. H., South, G. P., Takashima, S. & Ichimura, H.) 691
γ-Carboxymethylene-$\Delta^{\alpha\beta}$-butenolide, identification of, as a metabolite of 4-chlorophenoxyacetate in a *Pseudomonas* sp. (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
γ-Carboxymethylene-α-methyl-$\Delta^{\alpha\beta}$-butenolide, identification of, as a metabolite of 4-chloro-2-methylphenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 519
Cartilage, enzymic and electron-microscopic analysis of extracellular matrix vesicles associated with calcification in (Ali, S. Y., Anderson, H. C. & Sajdera, S. W.) 56P
Cartilage, nasal, ox, subunits of chemically treated protein–polysaccharide isolated from (Serafini-Fracassini, A., Stimson, W. H. & Floreani, L.) 101
Catabolite repression, accumulation of untranslated lactose-specific messenger ribonucleic acid during, in *Escherichia coli* K12 (Aboud, M. & Burger, M.) 219
Catalase, kinetics and mechanisms of, in peroxisomes of rat liver mitochondrial fraction (Chance, B. & Oshino, N.) 225
Catalase, repression of, in rat liver by porphyrinogenic drugs (Rao, M. R. S. & Padmanaban, G.) 593
Cathepsins, effect of pH on the activities of, in mouse liver heterolysosomes (Mego, J. L.) 445
Cationic molecules, accessibility of the deoxyribonucleic acid in deoxyribonucleoprotein to (Itzhaki, R. F.) 583
Cauliflower buds, isolation and properties of a 'malic' enzyme from mitochondria from (Macrae, A. R.) 495
Cells, heart, chick-embryo, isolated, kinetic analysis of insulin action on amino acid uptake by (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Cellular proliferation, template activity of chromatin during stimulation of, in WI-38 human diploid fibroblasts (Farber, J., Rovera, G. & Baserga, R.) 189

Cerebral cortex, rat, subcellular distribution and properties of diglyceride kinase of (Lapetina, E. G. & Hawthorne, J. N.) 171
Cetylpyridinium chloride, binding of, to the deoxyribonucleic acid in deoxyribonucleoprotein (Itzhaki, R. F.) 583
Chick embryo, kinetic analysis of insulin action on amino acid uptake by isolated heart cells from (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Chloramphenicol, biosynthesis and stability of ribonucleic acid in cultures of *Escherichia coli* M.R.E. 600 inhibited by (Midgley, J. E. M. & Gray, W. J. H.) 149
4-Chlorocatechol, identification of, as a metabolite of 4-chlorophenoxyacetate in a *Pseudomonas* sp. (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
5-Chloro-*o*-cresol, identification of, as a metabolite of 4-chloro-2-methylphenoxyacetate by *Pseudomonas* N.C.I.B. 9340 (Gamar, Y. & Gaunt, J. K.) 527
5-Chloro-*o*-cresol, tentative identification of, as a metabolite of 4-chloro-2-methylphenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 519
4-Chloro-2-hydroxyphenoxyacetate, identification of, as a metabolite of 4-chlorophenoxyacetate in a *Pseudomonas* sp. (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
cis–cis-γ-Chloro-α-methylmuconate, tentative identification of, as a metabolite of 4-chloro-2-methylphenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 519
4-Chloro-2-methylphenoxyacetate, formation of glyoxylate by side-chain cleavage during the metabolism of, by *Pseudomonas* N.C.I.B. 9340 (Gamar, Y. & Gaunt, J. K.) 527
4-Chloro-2-methylphenoxyacetate, preliminary evidence for the pathway of the metabolism of, by *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 519
4-Chloro-2-methylphenoxyacetate, resolution and properties of the ring-fission, lactonizing and delactonizing enzymes involved in the metabolism of, by *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 533
α-Chloromuconate, identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* I (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
cis–trans-β-Chloromuconate, identification of, as a metabolite of 4-chlorophenoxyacetate in a *Pseudomonas* sp. (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
7-Chloro-4-nitrobenzo-2-oxa-1,3-diazole, use of the reaction of, with thiol groups to form a fluorescent chromophore for the study of conformational changes in enzymes (Radda, G. K.) 385
2-Chlorophenol, identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* I (Evans, W. C., Smith, B. S. W., Fernley, H. N.& Davies, J. I.) 543
4-Chlorophenoxyacetate, pathway of the metabolism of, in a *Pseudomonas* sp. (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
Chlorpromazine, changes in drug-metabolizing activities in the liver of suckling rats as a result of treatment of the lactating mothers with (Darby, F. J.) 41
Cholesterol, C_{29} carboxylic acid intermediates in the biosynthesis of, in rat liver (Hornby, G. M. & Boyd, G.S.) 24P
Cholesterol, dietary, effect of, on cholesterol biosynthesis and other processes in mammalian liver (Booth, R., Gregory, K. W., Malone, E. M. & Robertson, I.) 25P
Cholesterol, esterification of, in rat plasma (Sugano, M.) 469
Cholesterol, exchange of 7-dehydrocholesterol and, between myelin and other membranes in developing rat brain (Banik, N. L. & Davison, A. N.) 751
Cholesterol, plasma, metabolism of (Myant, N. B.) 2P
Choline, origin of, found in rat brain (Ansell, G. B. & Spanner, S.) 741
Chondroitin, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Chondroitin sulphate, content of, in cat intervertebral disc (Butler, W. F. & Wels, C. M.) 647
Chondroitin sulphate, fractionated, properties of, from ox nasal septum (Wasteson, Å.) 477
Chondroitin sulphates, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Chromaffin granules, isolation and partial characterization of two proteins from membranes of, from adrenal glands of ox, horse, pig and man (Hörtnagl, H., Winkler, H., Schöpf, J. A. L. & Hohenwallner, W.) 299
Chromatin, accessibility of the deoxyribonucleic acid in, to cationic molecules (Itzhaki, R. F.) 583
Chromatin, template activity of, during stimulation of cellular proliferation in WI-38 human diploid fibroblasts (Farber, J., Rovera, G. & Baserga, R.) 189
Chromatography, thin-layer, simple and rapid methods involving the use of, for clinical purposes (Ersser, R. S., Seakins, J. W. T., Andrew, B. C. & Hughes, E. A.) 35P
CIBA Medal Lecture, fourth: enzymic explorations of starch and glycogen (Whelan, W. J.) 609
Clearing-factor lipase, *see* Lipase, clearing-factor
Collagen, polymeric, extraction of, from human skin (Francis, M. J. O. & Macmillan, D. C.) 34P
Colon, *see* Intestine, large
Colworth Medal Lecture, seventh: enzyme and membrane conformation in biochemical control (Radda, G. K.) 385
Creatine kinase, evidence for the transition-state organization of the catalytic site of (Milner-White, E. J. & Watts, D. C.) 727
m-Cresol, gentisate and its 3-methyl- and 4-methyl-substituted homologues as intermediates in the degradation of 3,5-xylenol, 2,5-xylenol and, by *Pseudomonas* spp. (Hopper, D. J. & Chapman, P. J.) 19
Cyanide, binding of, to horseradish ferroperoxidase (Phelps, C., Antonini, E. & Brunori, M.) 79
Cysteine residues, amino acid sequences around, of rabbit skeletal-muscle triose phosphate isomerase (Miller, J. C. & Waley, S. G.) 209
Cysteinesulphinate decarboxylase, subcellular distribution of, in developing rat brain (Agrawal, H. C., Davison, A. N. & Kaczmarek, L. K.) 759
Cystine, fractionation of proteins of normal human hair and of hair deficient in, from mentally retarded siblings (Pollitt, R. J. & Stonier, P. D.) 433
Cystinuria, amino acid metabolism in (Milne, M. D.) 9P
Cytochrome *b*-559, identification of, with a minor protein component of membranes of chromaffin granules from adrenal glands of ox, horse, pig and man (Hörtnagl, H., Winkler, H., Schöpf, J. A. L. & Hohenwallner, W.) 299
Cytochrome *P*-450, changes in the concentration of, in the liver of suckling rats as a result of treatment of the lactating mothers with phenobarbitone and with chlorpromazine (Darby, F. J.) 41
Cytochrome *P*-450, requirement for dietary lipds for the induction of, by phenobarbitone in rat liver microsomal fraction (Marshall, W. J. & McLean, A. E. M.) 569
Cytosol, activity of histone kinase in, from normal and regenerating rat livers (Siebert, G., Ord, M. G. & Stocken, L. A.) 721

D-enzyme, role of, in the catabolism of amylopectin (Whelan, W. J.) 609
7-Dehydrocholesterol, exchange of cholesterol and, between myelin and other membranes in developing rat brain (Banik, N. L. & Davison, A. N.) 751
Deoxyribonuclease, acid, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Deoxyribonucleic acid, accessibility of, in deoxyribonucleoprotein to cationic molecules (Itzhaki, R. F.) 583
Deoxyribonucleic acid, attachment of, to a fraction obtained from bacterial membranes (Daniels, M. J.) 197
Deoxyribonucleic acid, changes in the biosynthesis of, during stimulation of cellular proliferation in WI-38 human diploid fibroblasts (Farber, J., Rovera, G. & Baserga, R.) 189
Deoxyribonucleic acid, effects of electrostatic attraction and of water-entropy changes on the helical stability of (Lewin, S.) 20P
Deoxyribonucleic acid, sperm, salmon, binding of radioactive label from labelled phenacetin and related compounds to, *in vitro* (Nery, R.) 311
Deoxyribonucleohistone, effects of proteolytic enzymes on (Henson, P. & Walker, I. O.) 22P
Deoxyribonucleoprotein, accessibility of the deoxyribonucleic acid in, to cationic molecules (Itzhaki, R. F.) 583
Dermatan sulphate, content of, in cat intervertebral disc (Butler, W. F. & Wels, C. M.) 647
Dermatan sulphate, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Development, changes in the activities of adenylate kinase isoenzymes in rat liver during (Filler, R. & Criss, W. E.) 553
Development, changes in the activities of glycogen synthetase and glycogen phosphorylase in rat skeletal muscle during (Margreth, A., Di Mauro, S., Tartarini, A. & Salviati, G.) 597
Development, exchange of sterols between myelin and other membranes in rat brain during (Banik, N. L. & Davison, A. N.) 751
Development, subcellular distribution of taurine and cysteinesulphinate decarboxylase in rat brain during (Agrawal, H. C., Davison, A. N. & Kaczmarek, L. K.) 759
Diabetes, alloxan-, lack of effect of, on the distribution of growing peptide chains between puromycin-labile and puromycin-non-labile sites on polyribosomes of rat liver and skeletal muscle (Earl, D. C. N. & Hindley, S. T.) 267
Diamine oxidase, kidney, pig, oxidation of aminoalkylonium compounds by (Bardsley, W. G., Ashford, J. S. & Hill, C. M.) 557
3,5-Dichlorocatechol, identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* I and *Pseudomonas* N.C.I.B. 9340 (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
2,4-Dichloro-6-hydroxyphenoxyacetate, identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
$\alpha\gamma$-Dichloromuconate, tentative identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
2,4-Dichlorophenol, identification of, as a metabolite of 2,4-dichlorophenoxyacetate in *Pseudomonas* I and *Pseudomonas* N.C.I.B. 9340 (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
2,4-Dichlorophenoxyacetate, pathways of the metabolism of, in *Pseudomonas* I and *Pseudomonas* N.C.I.B. 9340 (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
Diet, protein-deficient, effect of, on albumin biosynthesis by perfused rat liver (Hoffenberg, R., Gordon, A. H. & Black, E. G.) 129
Diglyceride kinase, subcellular distribution and properties of, of rat cerebral cortex (Lapetina, E. G. & Hawthorne, J. N.) 171
Dihydroxyacetone phosphate, possible metabolic implications of the structure and reactivity of different forms of, with α-glycerophosphate dehydrogenase, fructose diphosphate aldolase and triose phosphate isomerase (Reynolds, S. J., Yates, D. W. & Pogson, C. I.) 285
2,5-Dihydroxybenzoate, *see* Gentisate
Dimethylaminoethanol, metabolism of, in rat brain and liver (Ansell, G. B. & Spanner, S.) 741
3-Dimethylaminonaphtheurhodine, use of, as a fluorescent probe for the study of conformational changes in membranes (Radda, G. K.) 385
1,2-Dimethylhydrazine, increased transfer ribonucleic acid methylase activity in tumours induced in mouse colon by the administration of (Pegg, A. E. & Hawks, A.) 121
1,3-Diphosphoglycerate, reaction of, with lobster tail-muscle and sturgeon muscle D-glyceraldehyde 3-phosphate dehydrogenases facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
Disulphide bonds, location of, of erabutoxin a from sea-snake (*Laticauda semifasciata*) venom (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Drug-metabolizing activity, changes in, in the liver of suckling rats as a result of treatment of the lactating mothers with phenobarbitone and with chlorpromazine (Darby, F. J.) 41

Electron radiation, target molecular weights of urease and L-glutamate dehydrogenase measured by exposure to, and their relevance to the size of the functional subunits (Blum, E. & Alper, T.) 677
Electron transfer, mechanism of, in plant-type iron–sulphur proteins (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Electron transport, capacity of mitochondria isolated from different tissues and species to accumulate calcium ions from the surrounding medium during (Carafoli, E. & Lehninger, A. L.) 681
Epididymis, rat, metabolic effects *in vitro* of the major component of ox growth hormone on adipose tissue from (Swislocki, N. I., Sonenberg, M. & Kikutani, M.) 633
Erabutoxin a and erabutoxin b, amino acid sequences of, from sea-snake (*Laticauda semifasciata*) venom (Sato, S. & Tamiya, N.) 453
Erabutoxin a, location of the disulphide bonds of, from sea-snake (*Laticauda semifasciata*) venom (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Ergotamine, biosynthesis of, in *Claviceps purpurea* (Fr.) Tul. (Bassett, R. A., Chain, E. B. & Corbett, K.) 58P
Erythrocytes, ox, differences in the permeability of, to fructose (Nimmo, I. A. & Hall, J. G.) 55P
Escherichia coli BB and 3/62, use of a new technique for the fractionation of membranes of (Daniels, M. J.) 197
Escherichia coli K12, accumulation of untranslated lactose-specific messenger ribonucleic acid during catabolite repression in (Aboud, M. & Burger, M.) 219
Escherichia coli M.R.E. 600, biosynthesis and stability of ribonucleic acid in chloramphenicol-inhibited cultures of (Midgley, J. E. M. & Gray, W. J. H.) 149

Escherichia coli M.R.E. 600, biosynthesis and stability of ribonucleic acid in rifampicin-inhibited cultures of (Gray, W. J. H. & Midgley, J. E. M.) 161
Escherichia coli, radioactive labelling of the multiple-drug-resistance factor in (Barker, G. R., Hardman, N. & Twose, T. M.) 48P
Escherichia coli uvrA⁻, genetic expression of the sex-factor after transfer into irradiated cells of (Barker, G. R. & Twose, T. M.) 49P
Esterase, 'neurotoxic', brain, changes in the response of, to inhibitors caused by solubilization procedures (Johnson, M. K.) 51P
Estradiol, *see* Oestradiol
Estrogen, *see* Oestrogen
Estrone, *see* Oestrone
Ethanolamine, conversion of, into choline in the rat (Ansell, G. B. & Spanner, S.) 741

Fat-cells, isolated, insulin, amino acid metabolism and lipolysis in (Jeanrenaud, B., Touabi, M., Cushman, S. W. & Heindel, J.-J.) 1P
Fatty acids, changes in the patterns of, in ox plasma (Mulder, I.) 12P
Fatty acids, polyunsaturated, dietary, requirement for, for the induction of cytochrome *P*-450 by phenobarbitone in rat liver microsomal fraction (Marshall, W. J. & McLean, A. E. M.) 569
Fatty acids, properties of rat liver microsomal palmitoyl-coenzyme A synthetase and the activation of (Bar-Tana, J., Rose, G. & Shapiro, B.) 353
Fatty acids, unsaturated, dietary alterations in, in guinea-pig brain, liver and muscle (Crawford, M. A., Lloyd, C. A. & Springett, L. V.) 11P
Ferredoxins, Mössbauer effect in, from *Scenedesmus* and spinach (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Ferroperoxidase, horseradish, binding of cyanide to (Phelps, C., Antonini, E. & Brunori, M.) 79
Fibroblasts, diploid, human, WI-38, template activity of chromatin during stimulation of cellular proliferation in (Farber, J., Rovera, G. & Baserga, R.) 189
Fluorescent probes, use of, for the study of conformational changes in enzymes and membranes (Radda, G. K.) 385
β-Fructofuranosidase, mechanism of action of, from yeast (Shall, S., Baseer, A. & Waheed, A.) 19P
Fructose diphosphate aldolase, possible metabolic implications of the structure and reactivity of different forms of dihydroxyacetone phsophate with α-glycerophosphate dehydrogenase, triose phosphate isomerase and (Reynolds, S. J., Yates, D. W. & Pogson, C. I.) 285
Fructose 6-phosphate, isotope-exchange reaction between fructose 1,6-diphosphate and, catalysed by ox heart phosphofructokinase (Hulme, E. C. & Tipton, K. F.) 181
Fucose, detection of, in urine of fasting human subjects (Bell, D. J. & Talukder, M. Q.-K.) 24P

Galactocarolose, biosynthesis of galactofuranosyl residues in, by cell-free extracts of *Penicillium charlesii* G. Smith (Garcia Trejo, A., Haddock, J. W., Chittenden, G. J. F. & Baddiley, J.) 49
Galactofuranosyl residues, biosynthesis of, in galactocarolose by cell-free extracts of *Penicillium charlesii* G. Smith (Garcia Trejo, A., Haddock, J. W., Chittenden, G. J. F. & Baddiley, J.) 49
β-Galactosidase, accumulation of untranslated lactose-specific messenger ribonucleic acid in *Escherichia coli* K12 in which the synthesis of, has been induced in the presence of glucose (Aboud, M. & Burger, M.) 219
β-Galactosidase, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Gentisate and its 3-methyl- and 4-methyl-substituted homologues as intermediates in the degradation of *m*-cresol, 3,5-xylenol and 2,5-xylenol by *Pseudomonas* spp. (Hopper, D. J. & Chapman, P. J.) 19
Gentisates, alkyl-substituted, enzymic degradation of, by cell-free extracts from *Pseudomonas* spp. (Hopper, D. J., Chapman, P. J. & Dagley, S.) 29
Glucagon, effect of, on spheroplasts of *Escherichia coli* (R-Candela, J. L., García, M. C. & Nieto, A.) 29P
D-Gluconate 6-*O*-sulphate, desulphation of, by extracts from *Pseudomonas fluorescens* N.C.I.B. 8248 grown on potassium D-glucose 6-*O*-sulphate as sole sulphur source (Fitzgerald, J. W. & Dodgson, K. S.) 277
Glucose, arteriovenous differences in the concentration of, across the brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
Glucose 6-phosphate dehydrogenase, induction by a metabolite of glucose of the synthesis of, in cultured mouse mammary-gland tissue (Green, C. D., Skarda, J. & Barry, J. M.) 20P
Glucose, role of adenosine 3′:5′-cyclic monophosphate in the regulation of insulin release by isolated rat islets of Langerhans stimulated by (Montague, W. & Cook, J. R.) 115
D-Glucose 6-*O*-sulphate, potassium, carbon and sulphur utilization during growth of *Pseudomonas fluorescens* N.C.I.B. 8248 on, as sole sulphur source (Fitzgerald, J. W. & Dodgson, K. S.) 277
Glutamate decarboxylase, subcellular distribution of, in developing rat brain (Agrawal, H. C., Davison, A. N. & Kaczmarek, L. K.) 759
L-Glutamate dehydrogenase, radiation-target molecular weight of, and its relevance to the size of the functional subunits (Blum, E. & Alper, T.) 677
Glutamine, incorporation of label from D-3-hydroxy-[^{14}C]butyrate and [3-^{14}C]acetoacetate into, in rat brain *in vivo* (Cremer, J. E.) 135
Glutamine, incorporation of label from D-3-hydroxy-[^{14}C]butyrate and [3-^{14}C]acetoacetate into, in rat brain *in vivo* (Cremer, J. E.) 135
D-Glyceraldehyde 3-phosphate dehydrogenases, lobster tail-muscle and sturgeon muscle, rate-determining processes and the number of simultaneously active sites of (Trentham, D. R.) 71
D-Glyceraldehyde 3-phosphate dehydrogenases, lobster tail-muscle and sturgeon muscle, reactions of, facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
D-Glyceraldehyde 3-phosphate, reaction of, with lobster tail-muscle and sturgeon muscle D-glyceraldehyde 3-phosphate dehydrogenases facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
α-Glycerophosphate dehydrogenase, possible metabolic implications of the structure and reactivity of different forms of dihydroxyacetone phosphate with fructose diphosphate aldolase, triose phosphate isomerase and (Reynolds, S. J., Yates, D. W. & Pogson, C. I.) 285
Glycine, kinetic analysis of insulin action on the uptake of, by isolated chick-embryo heart cells (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Glycine max, *see* Soya bean
Glycogen, structure and metabolism of (Whelan, W. J.) 609
Glycogen synthetase, activity of, in skeletal muscle from developing and adult rats and from other animals (Margreth, A., Di Mauro, S., Tartarini, A. & Salviati, G.) 597

Glycogen-storage disease type IV (amylopectinosis), enzymic origin of the glycogen present in subjects suffering from (Whelan, W. J.) 609
Glycolipophosphoprotein, calcium-binding, oestrogen-induced, chemical composition of, from *Xenopus laevis* (Ansari, A. Q., Dolphin, P. J., Lazier, C. B., Munday, K. A. & Akhtar, M.) 107
Glycoprotein, Tamm–Horsfall, chemical composition and subunit structure of, obtained from rabbit urine (Marr, A. M. S., Neuberger, A. & Ratcliffe, W. A.) 623
Glycosaminoglycans, composition of, in cat intervertebral disc (Butler, W. F. & Wels, C. M.) 647
Glycosaminoglycans, non-ultrafilterable, nature of, of normal human urine (Wessler, E.) 373
Glycosaminoglycans of hen's-egg white (Johnson, A. H. & Baker, J. R.) 16P
Glyoxylate, formation of, by side-chain cleavage during the metabolism of 4-chloro-2-methylphenoxyacetate by *Pseudomonas* N.C.I.B. 9340 (Gamar, Y. & Gaunt, J. K.) 527
Growth hormone, ox, metabolic effects *in vivo* and *in vitro* of the major component of (Swislocki, N. I., Sonenberg, M. & Kikutani, M.) 633
Guanine phosphoribosyltransferase, substrate specificity of, in *Schizosaccharomyces pombe* (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415

Haemoglobin, carboxy-, dielectric dispersion in aqueous solutions of (Grant, E. H., South, G. P., Takashima, S. & Ichimura, H.) 691
Haemoglobin, oxy-, dielectric dispersion in aqueous solutions of (Grant, E. H., South, G. P., Takashima, S. & Ichimura, H.) 691
Haemoproteins, binding of cyanide to (Phelps, C., Antonini, E. & Brunori, M.) 79
Hair, fractionation of proteins of, from normal humans and of cystine-deficient hair from mentally retarded siblings (Pollitt, R. J. & Stonier, P. D.) 433
Heart cells, chick-embryo, isolated, kinetic analysis of insulin action on amino acid uptake by (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Heart, ox, isotope-exchange reactions of phosphofructokinase from (Hulme, E. C. & Tipton, K. F.) 181
Heparan sulphate, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Hepatectomy, partial, activity of histone kinase in nuclear and cytoplasmic cell fractions from regenerating rat liver after (Siebert, G., Ord, M. G. & Stocken, L. A.) 721
Hepatectomy, partial, activity of histone kinase in regenerating rat liver after (Pawse, A. R., Ord, M. G. & Stocken, L. A.) 713
Hepatectomy, partial, lack of effect of, on the distribution of growing peptide chains between puromycin-labile and puromycin-non-labile sites on polyribosomes of rat liver and skeletal muscle (Earl, D. C. N. & Hindley, S. T.) 267
Heterolysosomes, liver, mouse, effect of pH on cathepsin activities in (Mego, J. L.) 445
Histone kinase, activity of, in nuclear and cytoplasmic cell fractions from normal and regenerating rat livers (Siebert, G., Ord, M. G. & Stocken, L. A.) 721
Histone kinase, activity of, in regenerating rat liver after partial hepatectomy (Pawse, A. R., Ord, M. G. & Stocken, L. A.) 713
Histones, coverage of the deoxyribonucleic acid in deoxyribonucleoprotein by (Itzhaki, R. F.) 583
Histones, stereochemical and energetic evaluation of the phosphorylation of, in chromatin (Lewin, S.) 47P
Histones, stimulation by adenosine 3′:5′-cyclic monophosphate of the phosphorylation of, by protein phosphokinase in rat testis preparations (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 333
Homocystinuria, detection of heterozygotes for, by oral loading with L-methionine (Fowler, B., Sardharwalla, I. B. & Robins, A. J.) 23P
Horseradish, binding of cyanide to ferroperoxidase from (Phelps, C., Antonini, E. & Brunori, M.) 79
Hyaluronic acid, content of, in cat intervertebral disc (Butler, W. F. & Wels, C. M.) 647
Hyaluronic acid, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Hyaluronidase, testicular, unsuitability of indoxyl acetate as a substrate for the assay of the activity of (Rhodes, C., Dodgson, K. S., Olavesen, A. H. & Högberg, B.) 575
Hydrogen ions, stoicheiometrical movements of potassium ions and, accompanying the absorption of amino acids by *Saccharomyces carlsbergensis* (Eddy, A. A. & Nowacki, J. A.) 701
Hydroquinone, *see* Quinol
p-Hydroxybenzoate, conversion of *p*-hydroxycinnamate into, by a rat liver mitochondrial enzyme (Ranganathan, S. & Ramasarma, T.) 487
D-3-Hydroxy[^{14}C]butyrate, incorporation of label from [3-^{14}C]acetoacetate and, into amino acids in rat brain *in vivo* (Cremer, J. E.) 135
3-Hydroxybutyrate, utilization of, *in vivo* by brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
p-Hydroxycinnamate, conversion of, into *p*-hydroxybenzoate by a rat liver mitochondrial enzyme (Ranganathan, S. & Ramasarma, T.) 487
17α-Hydroxy-17β-methylandrosta-1,4-dien-3-one, identification of, as a metabolite of 17β-hydroxy-17α-methylandrosta-1,4-dien-3-one in man (Macdonald, B. S., Sykes, P. J., Adhikary, P. M. & Harkness, R. A.) 26P
γ-Hydroxy-α-methylmuconate, tentative identification of, as a metabolite of 4-chloro-2-methylphenoxyacetate in *Pseudomonas* N.C.I.B. 9340 (Gaunt, J. K. & Evans, W. C.) 519
20α-Hydroxypregn-4-en-3-one, effect of vitamin A status on the secretion rate of, into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
5-Hydroxytryptamine *O*[^{35}S]-sulphate, metabolism of, in the rat (Rose, F. A. & Bleszynski, W. S.) 601
Hyperoxaluria, primary (Watts, R. W. E.) 7P
Hypophysectomy, lack of effect of, on the distribution of growing peptide chains between puromycin-labile and puromycin-non-labile sites on polyribosomes of rat liver and skeletal muscle (Earl, D. C. N. & Hindley, S. T.) 267
Hypoxanthine phosphoribosyltransferase, substrate specificity of, in *Schizosaccharomyces pombe* (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415

Immunoadsorbent, isolation of normal human immunoglobulin E by means of, formed by the mechanical entrapment of antibodies against a myeloma immunoglobulin E into a lattice of a highly cross-linked macroporous polyacrylamide gel (Carrel, S., Theilkäs, L., Morell, A., Skvaril, F. & Barandun, S.) 405

Immunoglobulin E, human, normal, isolation of, by means of an immunoadsorbent formed by the mechanical entrapment of antibodies against a myeloma immunoglobulin E into a lattice of a highly cross-linked macroporous polyacrylamide gel (Carrel, S., Theilkäs, L., Morell, A., Skvaril, F. & Barundan, S.) 405
Immunoglobulin γG, serum, patterns of heterogeneity of, in health, rheumatoid arthritis and cancer (Watkins, J. & Tee, D. E. H.) 33P
Immunoglobulin peptides, nascent, vectorial release of, by a microsomal preparation from mouse plasmacytoma MOPC 47A (Bevan, M. J.) 5
Indoxyl acetate, unsuitability of, as a substrate for the assay of testicular hyaluronidase activity (Rhodes, C., Dodgson, K. S., Olavesen, A. H. & Högberg, B.) 575
*myo*Inositol 1:2-cyclic phosphate, enzymic formation of, from phosphatidylinositol (Dawson, R. M. C., Freinkel, N., Jungalwala, F. B. & Clarke, N.) 605
Insulin, kinetic analysis of the action of, on amino acid uptake by isolated chick-embryo heart cells (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Insulin, role of adenosine 3′:5′-cyclic monophosphate in the regulation of the release of, by isolated rat islets of Langerhans (Montague, W. & Cook, J. R.) 115
Intervertebral disc, cat, composition of the glycosaminoglycans in (Butler, W. F. & Wels, C. M.) 647
Intestine, large, mouse, increased transfer ribonucleic acid methylase activity in tumours induced in, by the administration of 1,2-dimethylhydrazine (Pegg, A. E. & Hawks, A.) 121
Intestines, rat, binding of radioactive label from labelled phenacetin to, *in vivo* (Nery, R.) 311
Invertase, *see* β-Fructofuranosidase
Iodoacetamide, effects of anions on the inhibition of creatine kinase by (Milner-White, E. J. & Watts, D. C.) 727
Iron protein (azoferredoxin), evidence that the dilution effect of nitrogenase from *Azotobacter vinelandii* is due to limiting amounts of (Sorger, G. J.) 305
Iron–sulphur proteins, plant-type, mechanism of electron transfer in (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Islets of Langerhans, rat, isolated, role of adenosine 3′:5′-cyclic monophosphate in the regulation of insulin release by (Montague, W. & Cook, J. R.) 115
Isoamylase, use of, in determining amylopectin and glycogen structure (Whelan, W. J.) 609

Keratan sulphate, content of, in non-ultrafilterable glycosaminoglycans of normal human urine (Wessler, E.) 373
Keratin, fraction of, of normal human hair and of cystine-deficient hair from mentally retarded siblings (Pollitt, R. J. & Stonier, P. D.) 433
Ketone bodies, ^{14}C-labelled, incorporation of label from, into amino acids in rat brain *in vivo* (Cremer, J. E.) 135
Ketone bodies, utilization of, *in vivo* by brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
Kidney, pig, oxidation of aminoalkyl-onium compounds by diamine oxidase from (Bardsley, W. G., Ashford, J. S. & Hill, C. M.) 557
Kidney, rat, binding of radioactive label from labelled phenacetin to, *in vivo* (Nery, R.) 311
Kidney, rat, distribution of some hydrolases in glomeruli and tubular fragments prepared from, by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641
Lactate, arteriovenous differences in the concentration of, across the brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
Lactose, accumulation of untranslated messenger ribonucleic acid specific for, during catabolite repression in *Escherichia coli* K12 (Aboud, M. & Burger, M.) 219
Laticauda semifasciata, amino acid sequences of erabutoxin a and erabutoxin b from the venom of (Sato, S. & Tamiya, N.) 453
Laticauda semifasciata, location of the disulphide bonds of erabutoxin a from the venom of (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Lecithin, *see* Phosphatidylcholine
Leucine aminopeptidase, distribution of, in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641
Linoleic acid, anaerobic reaction between soya-bean lipoxygenase, linoleic acid hydroperoxides and (Garssen, G. J., Vliegenthart, J. F. G. & Boldingh, J.) 327
Linoleic acid hydroperoxides, anaerobic reaction between soya-bean lipoxygenase, linoleic acid and (Garssen, G. J., Vliegenthart, J. F. G. & Boldingh, J.) 327
Lipase, clearing-factor, influence of plasma lipids on the activity of (Brumby, P. E.) 10P
Lipids, dietary, requirement for, for the induction of cytochrome *P*-450 by phenobarbitone in rat liver microsomal fraction (Marshall, W. J. & McLean, A. E. M.) 569
Lipids, plasma, regulation of the metabolism of (Colloquium) 1P
Lipopolysaccharide, occurrence of 6-deoxy-L-altrose in, of *Yersinia enterocolitica* (Ellwood, D. C. & Kirk, G. R. A.) 14P
Lipoprotein lipase, *see* Lipase, clearing-factor
Lipoxygenase, soya-bean, anaerobic reaction between linoleic acid, linoleic acid hydroperoxides and (Garssen, G. J., Vliegenthart, J. F. G. & Boldingh, J.) 327
Liver, mouse, effect of pH on cathepsin activities in heterolysosomes from (Mego, J. L.) 445
Liver, rat, activation by phospholipase C *in vitro* and subcellular distribution of thymidine kinase of (Stirpe, F. & La Placa, M.) 347
Liver, rat, δ-aminolaevulate synthetase induction and catalase repression in, by porphyrinogenic drugs (Rao, M. R. S. & Padmanaban, G.) 593
Liver, rat, binding of radioactive label from labelled phenacetin to, *in vivo* (Nery, R.) 311
Liver, rat, changes in the activities of adenylate kinase isoenzymes in, during development (Filler, R. & Criss, W. E.) 553
Liver, rat, conversion of *p*-hydroxycinnamate into *p*-hydroxybenzoate by a mitochondrial enzyme in (Ranganathan, S. & Ramasarma, T.) 487
Liver, rat, formation of *myo*inositol 1:2-cyclic phosphate from phosphatidylinositol by a preparation of (Dawson, R. M. C., Freinkel, N., Jungalwala, F. B. & Clarke, N.) 605
Liver, rat, kinetics and mechanisms of catalase in peroxisomes of the mitochondrial fraction of (Chance, B. & Oshino, N.) 225
Liver, rat, normal and regenerating, activity of histone kinase in nuclear and cytoplasmic cell fractions from (Siebert, G., Ord, M. G. & Stocken, L. A.) 721
Liver, rat, perfused, comparison of methods used to study albumin biosynthesis by, with special reference to the effect of dietary protein deprivation (Hoffenberg, R., Gordon, A. H. & Black, E. G.) 129
Liver, rat, purification and properties of palmitoyl-coenzyme A synthetase from microsomal fraction of (Bar-Tana, J., Rose, G. & Shapiro, B.) 353

Liver, rat, rate-limiting step of protein biosynthesis *in vivo* and *in vitro* and the distribution of growing peptide chains between the puromycin-labile and puromycin-non-labile sites on polyribosomes of (Earl, D. C. N. & Hindley, S. T.) 267
Liver, rat, regenerating, activity of histone kinase in, after partial hepatectomy (Pawse, A. R., Ord, M. G. & Stocken, L. A.) 713
Liver, rat, requirement for dietary lipids for the induction of cytochrome *P*-450 by phenobarbitone in microsomal fraction of (Marshall, W. J. & McLean, A. E. M.) 569
Liver, rat, structure-bound sedimentability of some hydrolases of lysosomes from (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Liver, rat, suckling, changes in drug-metabolizing activities in, as a result of treatment of the lactating mothers with phenobarbitone and with chlorpromazine (Darby, F. J.) 41
Lobster, rate-determining processes and the number of simultaneously active sites of tail-muscle D-glyceraldehyde 3-phosphate dehydrogenase from (Trentham, D. R.) 71
Lobster, reactions of tail-muscle D-glyceraldehyde 3-phosphate dehydrogenase from, facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
Lyngbya sp., effects of concentration and other parameters on protein aggregation in C-phycocyanin isolated from (MacColl, R., Lee, J. J. & Berns, D. S.) 421
Lysosomes, hetero-, liver, mouse, effect of pH on cathepsin activities in (Mego, J. L.) 445
Lysosomes, liver, rat, structure-bound sedimentability of some hydrolases of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363

L-Malate–nicotinamide–adenine dinucleotide oxidoreductase (decarboxylating), isolation and properties of, from cauliflower bud mitochondria (Macrae, A. R.) 495
Malates, alkyl-substituted, enzymic degradation of, by cell-free extracts from *Pseudomonas* spp. (Hopper, D. J., Chapman, P. J. & Dagley, S.) 29
Maleates, alkyl-substituted, enzymic degradation of, by cell-free extracts from *Pseudomonas* spp. (Hopper, D. J., Chapmna, P. J. & Dagley, S.) 29
'Malic' enzyme, *see* L-Malate–nicotinamide–adenine dinucleotide oxidoreductase (decarboxylating)
Membrane, outer-segment, rod, rotational mobility of a fluorescent rhodopsin derivative in (Tao, T.) 54P
Membrane, plasma, *see* Plasma membrane
Membranes, bacterial, use of a new technique for the fractionation of (Daniels, M. J.) 197
Membranes, brain, rat, exchange of sterols by (Banik, N. L. & Davison, A. N.) 26P
Membranes, chromaffin-granule, isolation and partial characterization of two proteins from, from adrenal glands of ox, horse, pig and man (Hörtnagl, H., Winkler, H., Schöpf, J. A. L. & Hohenwallner, W.) 299
Membranes, control of respiration in, of *Azotobacter vinelandii* (Jones, C. W., Erickson, S. K. & Ackrell, B. A. C.) 46P
Membranes, erythrocyte, factors affecting the interactions of proteins isolated from (Maddy, A. H. & Kelly, P. G.) 62P
Membranes, erythrocyte, human, separation and partial characterization of some protein components of (Tanner, M. J. A. & Owens, D.) 40P
Membranes, erythrocyte, location of the protein components of (Bretscher, M. S.) 40P
Membranes, erythrocyte, mammalian, recombination *in vitro* of proteins and lipids from (Zwaal, R. F. A. & van Deenen, L. L. M.) 62P
Membranes, mesosomal and plasma, bactoprenol content of, of *Lactobacillus casei* (Throne, K. J. I. & Barker, D. C.) 45P
Membranes, mesosomal, properties of, isolated from *Micrococcus lysodeikticus* and *Bacillus megaterium* (Ellar, D. J., Thomas, T. D. & Posgate, J. A.) 44P
Membranes, mitochondrial, identification of the site of action of dicyclohexylcarbodi-imide as a proteolipid in (Cattell, K. J., Lindop, C. R., Knight, I. G. & Beechey, R. B.) 66P
Membranes, mitochondrial, properties of proteins of, dissolved in chloroform–methanol (Curtis, P. J.) 41P
Membranes, possible modes of organization of protein molecules in (Green, N. M.) 37P
Membranes, proteins of (Colloquium) 37P
Membranes, use of fluorescent probes for the study of conformational changes in (Radda, G. K.) 385
Messenger ribonucleic acid, *see* Ribonucleic acid, messenger
2-(*N*-Methylanilinino)naphthalene-6-sulphonate, use of, as a fluorescent probe for the study of conformational changes in enzymes and membranes (Radda, G. K.) 385
N-Methylisonicotinate, oxidation of, by *Achromobacter* D (Orpin, C. G., Knight, M. & Evans, W. C.) 58P
Microsomal fraction, liver, rat, purification and properties of palmitoyl-coenzyme A synthetase from (Bar-Tana, J., Rose, G. & Shapiro, B.) 353
Microsomal fraction, liver, rat, requirement for dietary lipids for the induction of cytochrome *P*-450 by phenobarbitone in (Marshall, W. J. & McLean, A. E. M.) 569
Microsomal preparation, liver, changes in drug-metabolizing activities in, from suckling rats as a result of treatment of the lactating mothers with phenobarbitone and with chlorpromazine (Darby, F. J.) 41
Microsomal preparation, liver, human, kinetics of the *N*-demethylation of ethylmorphine by a cytochrome *P*-450-dependent enzyme system in (Thorgeirsson, S. S. & Davies, D. S.) 30P
Microsomal preparation, vectorial release of nascent immunoglobulin peptides by, from mouse plasmacytoma MOPC 47A (Bevan, M. J.) 5
Mitochondria, cauliflower bud, isolation and properties of a 'malic' enzyme from (Macrae, A. R.) 495
Mitochondria, interaction of calcium ions with, from different tissues and species (Carafoli, E. & Lehninger, A. L.) 681
Mitochondria, liver, rat, conversion of *p*-hydroxycinnamate into *p*-hydroxybenzoate by an enzyme localized in (Ranganathan, S. & Ramasarma, T.) 487
Mitochondria, plant, oxidation of exogenous reduced nicotinamide–adenine dinucleotide by (Palmer, J. M. & Passam, H. C.) 16P
Mitochondrial fraction, liver, rat, kinetics and mechanisms of catalase in peroxisomes of (Chance, B. & Oshino, N.) 225
Muscle, skeletal, activity of glycogen synthetase in, from developing and adult rats and from other animals (Margreth, A., Di Mauro, S., Tartarini, A. & Salviati, G.) 597
Muscle, skeletal, rabbit, amino acid sequences around the cysteine residues of triose phosphate isomerase from (Miller, J. C. & Waley, S. G.) 209
Muscle, skeletal, rabbit, use of fluorescent probes for the study of conformational changes in phosphorylase *b* from (Radda, G. K.) 385
Muscle, skeletal, rat, rate-limiting step of protein biosynthesis *in vivo* and *in vitro* and the distribution of growing peptide chains between the puromycin-labile and puromycin-non-labile sites on polyribosomes of (Earl, D. C. N. & Hindley, S. T.) 267

Muscle, sturgeon, rate-determining processes and the number of simultaneously active sites of D-glyceraldehyde 3-phosphate dehydrogenase from (Trentham, D. R.) 71
Muscle, sturgeon, reactions of D-glyceraldehyde 3-phosphate dehydrogenase from, facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
Muscle, tail, lobster, rate-determining processes and the number of simultaneously active sites of D-glyceraldehyde 3-phosphate dehydrogenase from (Trentham, D. R.) 71
Muscle, tail, lobster, reactions of D-glyceraldehyde 3-phosphate dehydrogenase from, facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
Myelin, brain, human, amino acid sequence of the basic protein of (Carnegie, P. R.) 65P
Myelin, brain, rat, lysophosphatidylcholine-solubilized, resolution of protein components in (Gent, W. L. G., Gregson, N. A., Lovelidge, C. A. & Winder, A. F.) 64P
Myelin, brain, rat, separation of lipid–protein complexes of, by isopycnic centrifugation (Gent, W. L. G., Gregson, N. A., Lovelidge, C. A. & Winder, A. F.) 63P
Myelin, central-nervous-system, interaction of lysophosphatidylcholine with (Gent, W. L. G., Gregson, N. A., Lovelidge, C. A. & Winder, A. F.) 64P
Myelin, exchange of sterols between, and other membranes of developing rat brain (Banik, N. L. & Davison, A. N.) 751
Myelin, protein content of (Gent, W. L. G., Gregson, N. A., Lovelidge, C. A. & Winder, A. F.) 49P
Myelin, reaction of Trypan Blue with (Dickinson, J. P. & Aparicio, S. G. R.) 65P
Myoglobin, dipole moment of (Grant, E. H., South, G. P. & Walker, I. O.) 765

N-1-Naphthyl-*N*-phenylamine, use of, as a fluorescent probe for the study of conformational changes in membranes (Radda, G. K.) 385
Nasal septum, ox, properties of fractionated chondroitin sulphate from (Wasteson, Å.) 477
Neomycin, relationship between alkaline phosphatase activity and the formation of, in *Streptomyces fradiae* (Majumdar, M. K. & Majumdar, S. K.) 397
Neurohypophysis, rat, electrophoretic and immunological characterization of neurophysin from (Norström, A., Sjöstrand, J., Livett, B. G., Uttenthal, L. O. & Hope, D. B.) 671
Neurophysin, rat, electrophoretic and immunological characterization of (Norström, A., Sjöstrand, J., Livett, B. G., Uttenthal, L. O. & Hope, D. B.) 671
Neurotoxin, location of the disulphide bonds in, from sea-snake (*Laticauda semifasciata*) venom (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Neurotoxins, amino acid sequences of, from sea-snake (*Laticauda semifasciata*) venom (Sato, S. & Tamiya, N.) 453
Nicotinamide–adenine dinucleotide, oxidized, reactions of lobster tail-muscle and sturgeon muscle D-glyceraldehyde 3-phosphate dehydrogenases facilitated by (Trentham, D. R.) 59
Nitrate reductase, kinetics and inhibition by adenosine phosphates and nitrite of, from spinach (*Spinacea oleracea* L.) (Eaglesham, A. R. J. & Hewitt, E. J.) 18P
Nitrogenase, effect of nitrogenase components from mutant and wild-type strains of *Azotobacter vinelandii* on the dilution effect of (Sorger, G. J.) 305
4-Nitrophenetole, labelled, binding of radioactive label from, to rat tissues *in vivo* and to nucleic acids and ox plasma albumin *in vitro* (Nery, R.) 311
Nitrosamines, formation of, by human intestinal bacteria (Hawksworth, G. & Hill, M. J.) 28P
Nuclei, activity of histone kinase in, from normal and regenerating rat livers (Siebert, G., Ord, M. G. & Stocken, L. A.) 721
5′-Nucleotidase, distribution of, in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641

Oestradiol-17β, lack of effect of vitamin A status on the secretion rate of, into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Oestrogen, chemical composition of a calcium-binding glycolipophosphoprotein from *Xenopus laevis* induced by treatment with (Ansari, A. Q., Dolphin, P. J., Lazier, C. B., Munday, K. A. & Akhtar, M.) 107
Oestrogen, effect of, on the metabolism of testosterone by dog and rat prostate gland in tissue culture (Groom, M., Harper, M. E., Fahmy, A. R., Pierrepoint, C. G. & Griffiths, K.) 125
Oestrone, lack of effect of vitamin A status on the secretion rate of, into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Ovarian vein, effect of vitamin A status on the secretion rates of some steroids into the blood in, of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Oxyhaemoglobin, dielectric dispersion in aqueous solutions of (Grant, E. H., South, G. P., Takashima, S. & Ichimura, H.) 691

Palmitoyl-coenzyme A synthetase, purification and properties of, from rat liver microsomal fraction (Bar-Tana, J., Rose, G. & Shapiro, B.) 353
Penicillium charlesii G. Smith, biosynthesis of galactofuranosyl residues in galactocarolose by cell-free extracts of (Garcia Trejo, A., Haddock, J. W., Chittenden, G. J. F. & Baddiley, J.) 49
Pepsin, evidence for the reactive species in transpeptidation catalysed by, being the anion of the acceptor molecule (Kitson, T. M. & Knowles, J. R.) 249
Pepsin, inhibition of reactions catalysed by, by structural and stereochemical product analogues (Kitson, T. M. & Knowles, J. R.) 241
Peptide chains, growing, rate-limiting step of protein biosynthesis *in vivo* and *in vitro* and the distribution of, between puromycin-labile and puromycin-non-labile sites on polyribosomes of rat liver and skeletal muscle (Earl, D. C. N. & Hindley, S. T.) 267
Peptides, immunoglobulin, nascent, vectorial release of, by a microsomal preparation from mouse plasmacytoma MOPC 47A (Bevan, M. J.) 5
Peroxidase, ferro-, horseradish, binding of cyanide to (Phelps, C., Antonini, E. & Brunori, M.) 79
Peroxisomes, kinetics and mechanisms of catalase in, of rat liver mitochondrial fraction (Chance, B. & Oshino, N.) 225
pH, effect of, on cathepsin activities in mouse liver heterolysosomes (Mego, J. L.) 445
Phenacetin, characterization of metabolites of, in urine of the rat (Nery, R.) 317
Phenacetin, labelled, binding of radioactive label from, and related compounds to rat tissues *in vivo* and to nucleic acids and ox plasma albumin *in vitro* (Nery, R.) 311

4-Phenetidine, labelled, binding of radioactive label from, to rat tissues *in vivo* and to nucleic acids and ox plasma albumin *in vitro* (Nery, R.) 311
Phenobarbitone, changes in drug-metabolizing activities in the liver of suckling rats as a result of treatment of the lactating mothers with (Darby, F. J.) 41
Phenobarbitone, requirement for dietary lipids for the induction of cytochrome *P*-450 by, in rat liver microsomal fraction (Marshall, W. J. & McLean, A. E. M.) 569
Phenothiazine drugs, metabolism *in vitro* of, by rat liver microsomal fraction (Hewick, D. S. & Beckett, A. H.) 59P
Phenylmercury acetate, metabolism of, by rats (Daniel, J. W. & Gage, J. C.) 24P
Phormidium luridum, effects of concentration and other parameters on protein aggregation in C-phycocyanin isolated from (MacColl, R., Lee, J. J. & Berns, D. S.) 421
Phosphatase, acid, distribution of, in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641
Phosphatase, acid, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Phosphatase, alkaline, characterization of, from rat heart (Müller, E., Pearse, A. G. E. & Moss, D. W.) 31P
Phosphatase, alkaline, distribution of, in glomeruli and tubular fragments prepared from rat kidney by zonal centrifugation (Taylor, D. G., Price, R. G. & Robinson, D.) 641
Phosphatase, alkaline, electrophoretic mobilities of native and chemically modified isoenzymes of, from human placenta (Thomas, D. M. & Moss, D. W.) 30P
Phosphatase, alkaline, relationship between activity of, and neomycin formation in *Streptomyces fradiae* (Majumdar, M. K. & Majumdar, S. K.) 397
Phosphatidate, biosynthesis of, in subcellular fractions of rat cerebral cortex (Lapetina, E. G. & Hawthorne, J. N.) 171
Phosphatidylcholine, formation of, in rat brain and liver (Ansell, G. B. & Spanner, S.) 741
Phosphatidylcholine–cholesterol acyltransferase, properties of, from the ultracentrifugal residual protein fraction of rat plasma (Sugano, M.) 469
Phosphatidylinositol, enzymic formation of *myo*inositol 1:2-cyclic phosphate from (Dawson, R. M. C., Freinkel, N., Jungalwala, F. B. & Clarke, N.) 605
Phosphodiesterase, properties of, from rat liver (Donninger, C., Nobbs, B. T. & Wilson, K.) 51P
Phosphofructokinase, heart, ox, isotope-exchange reactions of (Hulme, E. C. & Tipton, K. F.) 181
3-Phosphoglycerate kinase, improved procedure for the isolation of, from baker's yeast (Scopes, R. K.) 89
Phospholipase C, activation of rat liver thymidine kinase *in vitro* by (Stirpe, F. & La Placa, M.) 347
Phospholipids, fat-cell, effects of adrenaline and of α- and β-adrenergic blocking agents on [^{32}P]phosphate incorporation into (Stein, J. M. & Hales, C. N.) 13P
Phosphorylase *b*, skeletal-muscle, rabbit, use of fluorescent probes for the study of conformational changes in (Radda, G. K.) 385
Phosphorylcholine, formation of, in the rat (Ansell, G. B. & Spanner, S.) 741
Phycocyanins, C-, effects of concentration and other parameters on protein aggregation in, isolated from three species of blue–green algae (MacColl, R., Lee, J. J. & Berns, D. S.) 421
Picolinamide, oxidation of, by a Gram-negative rod bacterium (Orpin, C. G., Knight, M. & Evans, W. C.) 57P
Pituitary gland, posterior, rat, electrophoretic and immunological characterization of neurophysin from (Norström, A., Sjöstrand, J., Livett, B. G., Uttenthal, L. O. & Hope, D. B.) 671
Plasma albumin, *see* Albumin, plasma
Plasma membrane, lymphocyte, pig, solubilization of, and partial separation of some of the components (Allan, D. & Crumpton, M. J.) 15P
Plasma membrane, proteins of, lining the lumen of the rat bladder (Ketterer, B. & Hicks, R. M.) 66P
Plasma membranes, liver and hepatoma, rat, phosphodiesterase and ribonuclease activities of (Norris, K. A., Burge, M. L. E. & Hinton, R. H.) 53P
Plasma membranes, liver, fractionation of the proteins of (Gurd, J. W., Evans, W. H. & Perkins, H. R.) 43P
Plasma, rat, effect *in vivo* of the major component of ox growth hormone on concentrations of glucose and free fatty acids in (Swislocki, N. I., Sonenberg, M. & Kikutani, M.) 633
Plasma, rat, properties of phosphatidylcholine–cholesterol acyltransferase from the ultracentrifugal residual protein fraction of (Sugano, M.) 469
Plasma, regulation of the metabolism of lipids of (Colloquium) 1P
Plasmacytoma MOPC 47A, mouse, vectorial release of nascent immunoglobulin peptides by a microsomal preparation from (Bevan, M. J.) 5
Polyacrylamide gel, macroporous, highly cross-linked, isolation of normal human immunoglobulin E by means of an immunoadsorbent formed by the mechanical entrapment of antibodies against a myeloma immunoglobulin E into a lattice of (Carrel, S., Theilkäs, L., Morell, A., Skvaril, F. & Barandun, S.) 405
Polyacrylamide–starch gel, improved method for the electrophoresis of enzymes by the use of (Parkin, B. H.) 61P
Polyamine oxidase in higher plants (Smith, T. A. & Stevens, R. A. J.) 17P
Polylysines, binding of, to the deoxyribonucleic acid in deoxyribonucleoprotein (Itzhaki, R. F.) 583
Polyribosomes, liver and skeletal-muscle, rat, rate-limiting step of protein biosynthesis *in vivo* and *in vitro* and the distribution of growing peptide chains between the puromycin-labile and puromycin-non-labile sites on (Earl, D. C. N. & Hindley, S. T.) 267
Polysomes, *see* Polyribosomes
Porphyrinogenic drugs, δ-aminolaevulate synthetase induction and catalase repression in rat liver by (Rao, M. R. S. & Padmanaban, G.) 593
Potassium D-glucose 6-*O*-sulphate, carbon and sulphur utilization during growth of *Pseudomonas fluorescens* N.C.I.B. 8248 on, as sole sulphur source (Fitzgerald, J. W. & Dodgson, K. S.) 277
Potassium ions, stoicheiometrical movements of protons and, accompanying the absorption of amino acids by *Saccharomyces carlsbergensis* (Eddy, A. A. & Nowacki, J. A.) 701
Pregnancy, effect of vitamin A status on the secretion rates of some steroids into ovarian-venous blood of rats during (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Progesterone, effect of vitamin A status on the secretion rate of, into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Proline, kinetic analysis of insulin action on the uptake of, by isolated chick-embryo heart cells (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Propionicacidaemia, distribution of C_{17} fatty acids in the liver of a child with (Gompertz, D.) 13P

Prostate gland, dog and rat, effect of oestrogen on the metabolism of testosterone by, in tissue culture (Groom, M., Harper, M. E., Fahmy, A. R., Pierrepoint, C. G. & Griffiths, K.) 125
Protease, *see* Proteinase
Protein, amino-azo-dye-binding, in rat liver cytosol (Ketterer, B. & Beale, D.) 53P
Protein, colchicine-binding, subcellular distribution of, in rat brain (Lagnado, J. R., Lyons, C. & Wickremasinghe, G.) 56P
Protein, effect of dietary deprivation of, on albumin biosynthesis by perfused rat liver (Hoffenberg, R., Gordon, A. H. & Black, E. G.) 129
Protein, effects of concentration and other parameters on the aggregation of, in C-phycocyanins isolated from three species of blue–green algae (MacColl, R., Lee, J. J. & Berns, D. S.) 421
Protein fraction, ultracentrifugal residual, properties of phosphatidylcholine–cholesterol acyltransferase from, of rat plasma (Sugano, M.) 469
Protein, iron (azoferredoxin), evidence that the dilution effect of nitrogenase from *Azotobacter vinelandii* is due to limiting amounts of (Sorger, G. J.) 305
Protein, neurotoxic, location of the disulphide bonds in, from sea-snake (*Laticauda semifasciata*) venom (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Protein phosphokinase, hormonal influences on adenosine 3′:5′-cyclic monophosphate-stimulated reactions of, in rat reproductive organs (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 343
Protein phosphokinase, stimulation by adenosine 3′:5′-cyclic monophosphate of the phosphorylation of basic proteins by, in rat testis preparations (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 333
Protein–polysaccharide, chemically treated, subunits of, isolated from ox nasal cartilage (Serafini-Fracassini, A., Stimson, W. H. & Floreani, L.) 101
Protein–polysaccharides, nature of the non-ultrafilterable glycosaminoglycans obtained by proteolysis of, of normal human urine (Wessler, E.) 373
Protein, rate-limiting step of the biosynthesis of, *in vivo* and *in vitro* and the distribution of growing peptide chains between the puromycin-labile and puromycin-non-labile sites on polyribosomes of rat liver and skeletal muscle (Earl, D. C. N. & Hindley, S. T.) 267
Proteinase, acid, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Proteinases, activities of ribonucleases and, in ox pituitary-gland lobes (Pickup, J. C. & Hope, D. B.) 31P
Proteins, basic, stimulation by adenosine 3′:5′-cyclic monophosphate of the phosphorylation of, by protein phosphokinase in rat testis preparations (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 333
Proteins, fractionation of, of normal human hair and of cystine-deficient hair from mentally retarded siblings (Pollitt, R. J. & Stonier, P. D.) 433
Proteins, iron–sulphur, plant-type, mechanism of electron transfer in (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Proteins, neurotoxic, amino acid sequences of, from sea-snake (*Laticauda semifasciata*) venom (Sato, S. & Tamiya, N.) 453
Proteins of membranes (Colloquium) 37P
Proteins released by erythrocyte 'ghosts' at low ionic strength (Harris, J. R.) 38P
Proteins, two, isolation and partial characterization of, from membranes of chromaffin granules from adrenal glands of ox, horse, pig and man (Hörtnagl, H., Winkler, H., Schöpf, J. A. L. & Hohenwallner, W.) 299
Proteoglycan, *see* Protein–polysaccharide
Proteolytic enzymes, effect of pH on the activities of, in mouse liver heterolysosomes (Mego, J. L.) 445
Protons, stoicheiometrical movements of potassium ions and, accompanying the absorption of amino acids by *Saccharomyces carlsbergensis* (Eddy, A. A. & Nowacki, J. A.) 701
Pseudomonas fluorescens N.C.I.B. 8248, carbon and sulphur utilization during growth of, on potassium D-glucose 6-*O*-sulphate as sole sulphur source (Fitzgerald, J. W. & Dodgson, K. S.) 277
Pseudomonas I, pathway of the metabolism of 2,4-dichlorophenoxyacetate in (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
Pseudomonas N.C.I.B. 9340, formation of glyoxylate by side-chain cleavage during the metabolism of 4-chloro-2-methylphenoxyacetate by (Gamar, Y. & Gaunt, J. K.) 527
Pseudomonas N.C.I.B. 9340, pathway of the metabolism of 2,4-dichlorophenoxyacetate in (Evans, W. C., Smith, B. S. W., Fernley, H. N. & Davies, J. I.) 543
Pseudomonas N.C.I.B. 9340, preliminary evidence for the pathway of the metabolism of 4-chloro-2-methylphenoxyacetate by (Gaunt, J. K. & Evans, W. C.) 519
Pseudomonas N.C.I.B. 9340, resolution and properties of the ring-fission, lactonizing and delactonizing enzymes involved in the metabolism of 4-chloro-2-methylphenoxyacetate by (Gaunt, J. K. & Evans, W. C.) 533
Pseudomonas sp., pathway of the metabolism of 4-chlorophenoxyacetate by (Evans, W. C., Smith, B. S. W., Moss, P. & Fernley, H. N.) 509
Pseudomonas spp., enzymic degradation of alkyl-substituted gentisates, maleates and malates by cell-free extracts from (Hopper, D. J., Chapman, P. J. & Dagley, S.) 29
Pseudomonas spp., gentisate and its 3-methyl- and 4-methyl-substituted homologues as intermediates in the degradation of *m*-cresol, 3,5-xylenol and 2,5-xylenol by (Hopper, D. J. & Chapman, P. J.) 19
Pullulanase, use of, in determining amylopectin and glycogen structure (Whelan, W. J.) 609
Purine phosphoribosyltransferases, substrate specificity of, in *Schizosaccharomyces pombe* (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415
Puromycin, effect of, on the vectorial release of nascent immunoglobulin peptides by a microsomal preparation from mouse plasmacytoma MOPC 47A (Bevan, M. J.) 5
Pyruvate, arteriovenous differences in the concentration of, across the brain of adult and suckling rats (Hawkins, R. A., Williamson, D. H. & Krebs, H. A.) 13
Pyruvate carboxylase apoenzyme, mechanism and control of the synthesis of the holoenzyme from, and (+)-biotin in *Bacillus stearothermophilus* (Sundaram, T. K., Cazzulo, J. J. & Kornberg, H. L.) 663
Pyruvate carboxylase apoenzyme, purification and properties of, from *Bacillus stearothermophilus* (Cazzulo, J. J., Sundaram, T. K., Dilks, S. N. & Kornberg, H. L.) 653
Pyruvate carboxylase holoenzyme synthetase, mechanism and control of the reaction catalysed by, from *Bacillus stearothermophilus* (Sundaram, T. K., Cazzulo, J. J. & Kornberg, H. L.) 663
Pyruvate carboxylase holoenzyme synthetase, purification and properties of, from *Bacillus stearothermophilus* (Cazzulo, J. J., Sundaram, T. K., Dilks, S. N. & Kornberg, H. L.) 653

Q-enzyme, mechanism of chain transfer catalysed by (Whelan, W. J.) 609

Quinol, excretion of, mainly as conjugates of sulphuric acid and glucosiduronic acid, as a metabolite of phenacetin in urine of the rat (Nery, R.) 317

R-enzyme, use of, in determining amylopectin structure (Whelan, W. J.) 609
Red blood cells, *see* Erythrocytes
Retinoic acid, metabolism of, in the rat (Sundaresan, P. R. & Bhagavan, H. N.) 1
Retinoic acid, secretion rates of some steroids into ovarian-venous blood of pregnant rats on a vitamin A-deficient diet supplemented with (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Retinol, formation of, from retinyl methyl ether administered to vitamin A-deficient rats (Narindrasorasak, S., Pimpa, P. & Lakshmanan, M. R.) 427
Retinol, use of, as a fluorescent probe for the study of conformational changes in membranes (Radda, G. K.) 385
Retinyl acetate, secretion rates of some steroids into ovarian-venous blood of pregnant rats on a vitamin A-deficient diet supplemented with (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Retinyl methyl ether, metabolism of, in the rat *in vivo* (Narindrasorasak, S., Pimpa, P. & Lakshmanan, M. R.) 427
Retinyl palmitate, formation of, from retinyl methyl ether administered to vitamin A-deficient rats (Narindrasorasak, S., Pimpa, P. & Lakshmanan, M. R.) 427
Ribonuclease, acid, lysosomal, liver, rat, structure-bound sedimentability of (Baccino, F. M., Rita, G. A. & Zuretti, M. F.) 363
Ribonucleic acid, biosynthesis and stability of, in chloramphenicol-inhibited cultures of *Escherichia coli* M.R.E. 600 (Midgley, J. E. M. & Gray, W. J. H.) 149
Ribonucleic acid, biosynthesis and stability of, in rifampicin-inhibited cultures of *Escherichia coli* M.R.E. 600 (Gray, W. J. H. & Midgley, J. E. M.) 161
Ribonucleic acid, changes in the biosynthesis of, during stimulation of cellular proliferation in WI-38 human diploid fibroblasts (Farber, J., Rovera, G. & Baserga, R.) 189
Ribonucleic acid, evidence of *O*-methylation of, from $\mu 2$ bacteriophage by *N*-methyl-*N*-nitrosourea (Lawley, P. D., Shooter, K. V., House, W. L. & Shah, S. A.) 22P
Ribonucleic acid, messenger, lactose-specific, untranslated, accumulation of, during catabolite repression in *Escherichia coli* K12 (Aboud, M. & Burger, M.) 219
Ribonucleic acid, ribosomal, biosynthesis of, in *Bacillus subtilis* 168 (Avery, R. J. & Midgley, J. E. M.) 139
Ribonucleic acid (transfer) methylase, increased activity of, in tumours induced in mouse colon by the administration of 1,2-dimethylhydrazine (Pegg, A. E. & Hawks, A.) 121
Ribonucleic acid, transfer, yeast, effect of deuterium oxide (D_2O) substitution for water (H_2O) on the helical stability of (Lewin, S. & Stow, J. R.) 48P
Ribonucleic acid, yeast, binding of radioactive label from labelled phenacetin and related compounds to, *in vitro* (Nery, R.) 311
Ribosomal ribonucleic acid, *see* Ribonucleic acid, ribosomal
Rifampicin, biosynthesis and stability of ribonucleic acid in cultures of *Escherichia coli* M.R.E. 600 inhibited by (Gray, W. J. H. & Midgley, J. E. M.) 161

Saccharomyces carlsbergensis, stoicheiometrical proton and potassium ion movements accompanying the absorption of amino acids by (Eddy, A. A. & Nowacki, J. A.) 701
Scenedesmus sp., Mössbauer effect in ferredoxin from (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Schizosaccharomyces pombe, substrate specificity of purine phosphoribosyltransferases in (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415
Sea snake (*Laticauda semifasciata*), amino acid sequences of erabutoxin a and erabutoxin b from the venom of (Sato, S. & Tamiya, N.) 453
Sea snake (*Laticauda semifasciata*), location of the disulphide bonds of erabutoxin a from the venom of (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Septum, nasal, ox, properties of fractionated chondroitin sulphate from (Wasteson, Å.) 477
Serine, kinetic analysis of insulin action on the uptake of, by isolated chick-embryo heart cells (Guidotti, G. G., Borghetti, A. F., Lüneburg, B. & Gazzola, G. C.) 409
Serotonin, *see* 5-Hydroxytryptamine
Skeletal muscle, *see* Muscle, skeletal
Somatotrophin, *see* Growth hormone
Soya bean (*Glycine max*), anaerobic reaction between linoleic acid, linoleic acid hydroperoxides and lipoxygenase from (Garssen, G. J., Vliegenthart, J. F. G. & Boldingh, J.) 327
Spinacea oleracea, *see* Spinach
Spinach (*Spinacea oleracea*), Mössbauer effect in ferredoxin from (Rao, K. K., Cammack, R., Hall, D. O. & Johnson, C. E.) 257
Starch, structure and metabolism of (Whelan, W. J.) 609
Starvation, effect of, on the properties of phosphatidylcholine–cholesterol acyltransferase of rat plasma (Sugano, M.) 469
Steroids, effect of vitamin A status on the secretion rates of, into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Sterols, exchange of, between myelin and other membranes of developing rat brain (Banik, N. L. & Davison, A. N.) 751
Streptomyces fradiae, relationship between alkaline phosphatase activity and neomycin formation in (Majumdar, M. K. & Majumdar, S. K.) 397
Sturgeon, rate-determining processes and the number of simultaneously active sites of muscle D-glyceraldehyde 3-phosphate dehydrogenase from (Trentham, D. R.) 71
Sturgeon, reactions of muscle D-glyceraldehyde 3-phosphate dehydrogenase from, facilitated by oxidized nicotinamide–adenine dinucleotide (Trentham, D. R.) 59
Sulphur, carbon and sulphur utilization during growth of *Pseudomonas fluorescens* N.C.I.B. 8248 on potassium D-glucose 6-*O*-sulphate as sole source of (Fitzgerald, J. W. & Dodgson, K. S.) 277
Supernatant fraction, *see* Cytosol

Tamm–Horsfall glycoprotein, chemical composition and subunit structure of, obtained from rabbit urine (Marr, A. M. S., Neuberger, A. & Ratcliffe, W. A.) 623
Taurine, subcellular distribution of, in developing rat brain (Agrawal, H. C., Davison, A. N. & Kaczmarek, L. K.) 759
Testis, ox, unsuitability of indoxyl acetate as a substrate for the assay of hyaluronidase activity in (Rhodes, C., Dodgson, K. S., Olavesen, A. H. & Högberg, B.) 575

Testis, rat, stimulation by adenosine 3′:5′-cyclic monophosphate of the phosphorylation of basic proteins by protein phosphokinase in preparations of (Reddi, A. H., Ewing, L. L. & Williams-Ashman, H. G.) 333
Testosterone, effect of oestrogen on the metabolism of, by dog and rat prostate gland in tissue culture (Groom, M., Harper, M. E., Fahmy, A. R., Pierrepoint, C. G. & Griffiths, K.) 125
Thiol groups, use of the reaction of 7-chloro-4-nitrobenzo-2-oxa-1,3-diazole with, to form a fluorescent chromophore for the study of conformational changes in enzymes (Radda, G. K.) 385
Thymidine kinase, liver, rat, activation by phospholipase C *in vitro* and subcellular distribution of (Stirpe, F. & La Placa, M.) 347
Thyroid gland, pig, formation of *myo*inositol 1:2-cyclic phosphate from phosphatidylinositol by a preparation of (Dawson, R. M. C., Freinkel, N., Jungalwala, F. B. & Clarke, N.) 605
Tocopherols, biosynthesis of, and related compounds in *Anabaena variabilis* (Botham, K. M. & Pennock, J. F.) 127
Toluidine Blue, binding of, to the deoxyribonucleic acid in deoxyribonucleoprotein (Itzhaki, R. F.) 583
Transfer ribonucleic acid, *see* Ribonucleic acid, transfer
Transpeptidation, pepsin-catalysed, evidence for the reactive species in, being the anion of the acceptor molecule (Kitson, T. M. & Knowles, J. R.) 249
Transpeptidation, pepsin-catalysed, inhibition of, by structural and stereochemical product analogues (Kitson, T. M. & Knowles, J. R.) 241
Triglycerides, plasma, methods and problems in the study of the metabolism of, in man (Carlson, L. A.) 2P
Triglycerides, plasma, nutritional and endocrine factors influencing the metabolism of (Lewis, B.) 3P
Triglycerides, plasma, regulation of the utilization of (Robinson, D. S.) 2P
Triose phosphate isomerase, possible metabolic implications of the structure and reactivity of different forms of dihydroxyacetone phosphate with α-glycerophosphate dehydrogenase, fructose diphosphate aldolase and (Reynolds, S. J., Yates, D. W. & Pogson, C. I.) 285
Triose phosphate isomerase, skeletal-muscle, rabbit, amino acid sequences around the cysteine residues of (Miller, J. C. & Waley, S. G.) 209
Triose phosphates, discussion of possible metabolic implications of compartmentalization of (Reynolds, S. J., Yates, D. W. & Pogson, C. I.) 285
Tryptophan oxygenase, effects of sex hormones on the activities of, and other corticosteroid-inducible enzymes in rat liver (Braidman, I. P. & Rose, D. P.) 28P
Tryptophanase, biosynthesis *in vitro* of, with polyribosomes from *Escherichia coli* (Parish, J. H., Bashar, S. A. M. K. & Brown, M.) 21P
Tumours, increased transfer ribonucleic acid methylase activity in, induced in mouse colon by the administration of 1,2-dimethylhydrazine (Pegg, A. E. & Hawks, A.) 121

Urea, anomalous behaviour of ox plasma albumin during isoelectric focusing in the presence of (Salaman, M. R. & Williamson, A. R.) 93
Urea, effect of dietary protein deprivation on the production of, by perfused rat liver (Hoffenberg, R., Gordon, A. H. & Black, E. G.) 129
Urea, inhibition by leucine of the biosynthesis of, in perfused rat liver (Buttery, P. J. & Boorman, K. N.) 55P
Urease, radiation-target molecular weight of, and its relevance to the size of the functional subunits (Blum, E. & Alper, T.) 677
Uric acid stones, urinary, metabolic basis of the formation of (Wrong, O. M.) 9P
Urinary calculi, biochemistry of the formation of (Colloquium) 5P
Urine, characterization of metabolites of phenacetin in, of the rat (Nery, R.) 317
Urine, excretion of largely unchanged 5-hydroxytryptamine *O*-sulphate in, after its administration to the rat (Rose, F. A. & Bleszynski, W. S.) 601
Urine, excretion of metabolites of arecoline and arecoline 1-oxide in, in the rat (Nery, R.) 503
Urine, metabolites of retinoic acid in, of the rat (Sundaresan, P. R. & Bhagavan, H. N.) 1
Urine, nature of the non-ultrafilterable glycosaminoglycans of, of normal humans (Wessler, E.) 373
Urine, rabbit, chemical composition and subunit structure of Tamm–Horsfall glycoprotein obtained from (Marr, A. M. S., Neuberger, A. & Ratcliffe, W. A.) 623
Urine, uptake of calcium from, *in vitro* by powdered phosphates and oxalates (Philpot, G. R.) 23P
Urolithiasis, aetiology of, in Karachi (Khan, I. A. & Rahman, M. A.) 22P

Venom, sea-snake (*Laticauda semifasciata*), amino acid sequences of erabutoxin a and erabutoxin b from (Sato, S. & Tamiya, N.) 453
Venom, sea-snake (*Laticauda semifasciata*), location of the disulphide bonds in erabutoxin a from (Endo, Y., Sato, S., Ishii, S. & Tamiya, N.) 463
Vitamin A, effect of status with regard to, on the secretion rates of some steroids into ovarian-venous blood of pregnant rats (Ganguly, J., Pope, G. S., Thompson, S. Y., Toothill, J., Edwards-Webb, J. D. & Waynforth, H. B.) 235
Vitamin A, metabolism of retinyl methyl ether *in vivo* in rats deficient in (Narindrasorasak, S., Pimpa, P. & Lakshmanan, M. R.) 427
Vitellogenin, chemical composition of, from *Xenopus laevis* (Ansari, A. Q., Dolphin, P. J., Lazier, C. B., Munday, K. A. & Akhtar, M.) 107

Water, bound, association of, with oxyhaemoglobin and carboxyhaemoglobin in aqueous solutions as found by dielectric measurements (Grant, E. H., South, G. P., Takashima, S. & Ichimura, H.) 691
Water, correlation between glycosaminoglycan content and the content of, in cat intervertebral disc (Butler, W. F. & Weis, C. M.) 647
Wool, Merino, extraction of a protein fraction rich in glycine, serine, tyrosine and phenylalanine from (Kingham, B., Riley, S. P. & Robson, A.) 60P

Xanthine phosphoribosyltransferase, substrate specificity of, in *Schizosaccharomyces pombe* (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415
Xenoprotein, *see* Vitellogenin
Xenopus laevis, chemical composition of an oestrogen-induced calcium-binding glycolipophosphoprotein from (Ansari, A. Q., Dolphin, P. J., Lazier, C. B., Munday, K. A. & Akhtar, M.) 107
3,5-Xylenol, gentisate and its 3-methyl- and 4-methyl-substituted homologues as intermediates in the degradation of *m*-cresol, 2,5-xylenol and, by *Pseudomonas* spp. (Hopper, D. J. & Chapman, P. J.) 19

Yeast, baker's, improved procedure for the isolation of 3-phosphoglycerate kinase from (Scopes, R. K.) 89

Yeast (*Saccharomyces carlsbergensis*), stoicheiometrical proton and potassium ion movements accompanying the absorption of amino acids by (Eddy, A. A. & Nowacki, J. A.) 701

Yeast (*Schizosaccharomyces pombe*), substrate specificity of purine phosphoribosyltransferases in (De Groodt, A., Whitehead, E. P., Heslot, H. & Poirier, L.) 415